SURVEYING AND EXPLORING IN SIAM.

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SURVEYING AND EXPLORING IN SIAM.

BY

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LONDON

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TO

THE MEMORY

OF

THE LATE

HENRY S. SMILES, C.E.,

GEORGE H. BUSH,

AND

NAI TAT,

MY LAST ASSISTANTS AND COMPANIONS, WHO DIED WHILE SURVEYING IN THE INTERIOR OF SIAM, THE LAST-NAMED HAVING BEEN FOULLY MURDERED BY ROBBERS ON THE BRITISH FRONTIER,

I DEDICATE THESE

NOTES

J. M

PREFACE.

For a period of twelve years (1881–93) I was engaged in collecting material for the compilation of a map of Siam which might form the foundation of a national survey system. Looking back over these years, and considering not only the severity of the labour, but the many annoyances and obstacles which impeded the progress of the work, I am surprised at the amount of success which was achieved. The improvements recently effected in the Government Departments of Siam are so extensive, that one who is acquainted only with existing conditions can hardly imagine the labour and worry which were involved in service under the old *regime*.

That the results of the twelve years' labour may be secure and easily accessible, they have been placed among the records of the Royal Geographical Society. The following notes claim only to record such incidents and observations as seemed most likely to interest those who have at heart the progress of geographical work throughout the world. The notes pretend to nothing but a faithful record of facts obtained by incessant and often dangerous labour.

The Siamese Survey Department, now provided with a numerous staff, have settled down to regular cadastral work. Their labours are facilitated by the large-scale surveys near the capital, and by the chain and compass preliminary surveys of the districts in the valley of the Me Nam Chao Phya already executed, and, though less

heroic in their nature than those of the surveying pioneers, will be of much practical benefit.

I trust that the map and notes may strengthen the interest already shown in a very interesting country and people, and may be serviceable to any who may venture there. Above all, I hope they may be useful to the Siamese themselves.

JAS. McCARTHY.

LONDON,
1st June, 1898.

It should be stated that the map which accompanies this volume is printed on copper, and that the expense has been liberally borne by the Siamese Government.

The pen-and-ink sketches which are marked with an asterisk have been kindly contributed by Mr. H. Warington Smyth, who has also revised the proofs.

SIR R. G. S.

LONDON,
March, 1900.

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MAP OF THE KINGDOM OF SIAM AND ITS DEPENDENCIES *In pocket at end*

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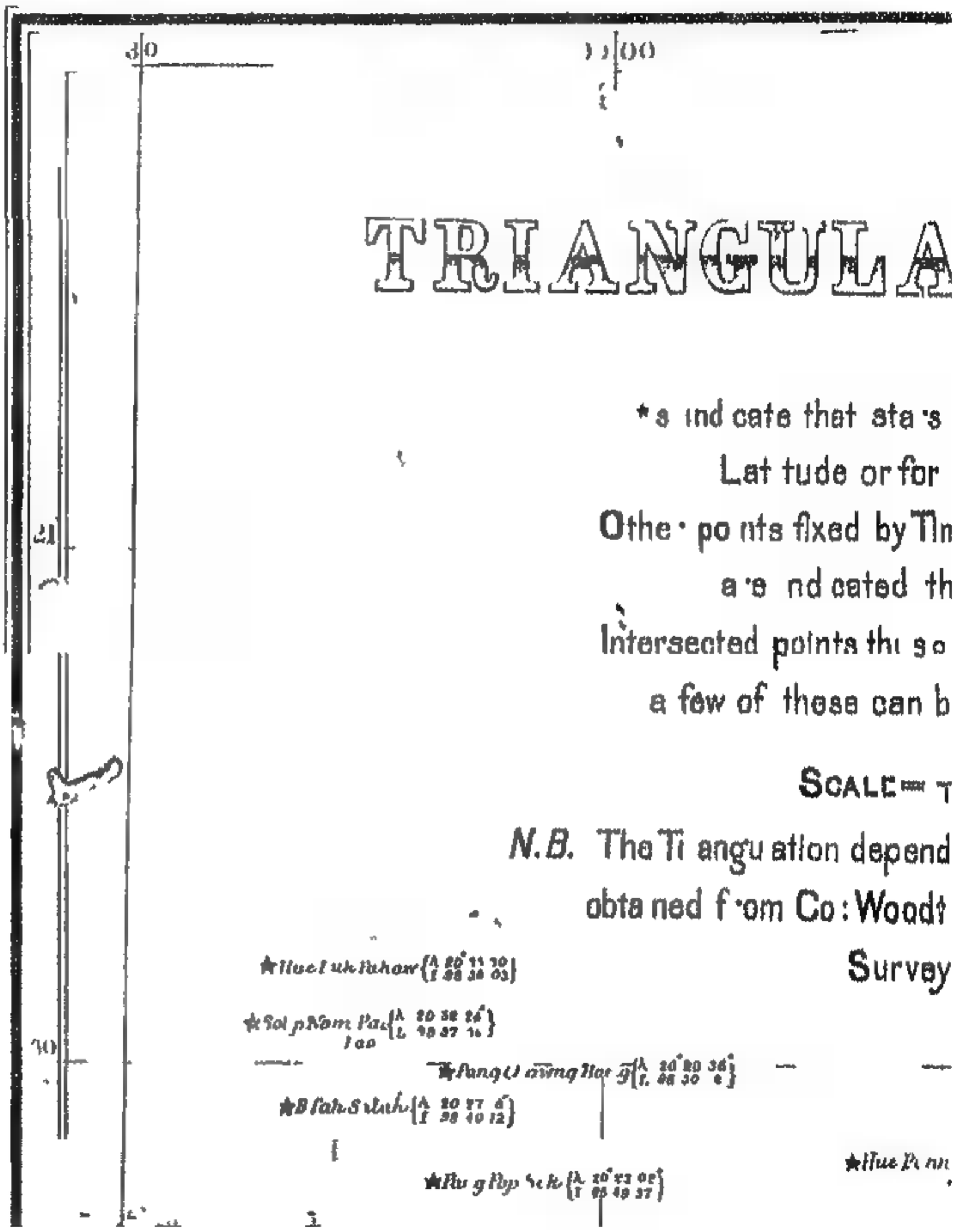
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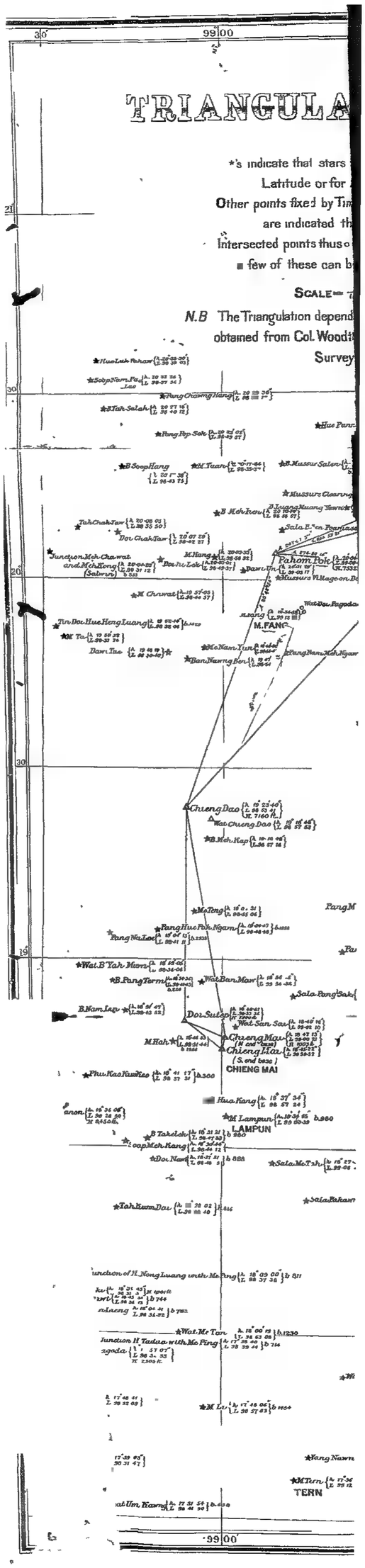
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SURVEYING AND EXPLORING IN SIAM.

CHAPTER I

BEGINNINGS AT RAHENG AND BANGKOK

In the year 1881 I began to prepare the way for a general map of Siam, and after various discouraging experiences, involving two months' delay, I set out alone with two Siamese commissioners to examine the route in Siamese territory for the erection of a telegraph line between Bangkok and Maulmein by way of Raheng or Tak.

The Eastern Frontier Series Survey of India had determined the positions of some peaks west of Raheng, and near the frontier, and it had been found desirable to fix the position of Raheng by a small series of triangles connecting the peaks. This I succeeded in doing, after an unnecessary amount of labour, during which I learnt what it was to be associated with old-fashioned Siamese officials, who deliberately went out of their way to create obstruction.

It is unnecessary to enter into details to show how the work was done. On one occasion, when after a wearisome tramp over the hills, I returned to quarters for the night, no trace of the tents could be found. There was still, however, sufficient light to ascertain by the tracks the direction the elephants had taken. Those who accompanied me were ignorant of the pathways, nor could I speak their language, so there was nothing for it but to keep on the steep, floundering along in the dark over slippery rocks sometimes up to my neck in bitterly cold water; and very glad I was when at last I reached the camp after midnight. On another occasion the men at the referring lamp, when I was taking some observations for azimuth, ran off with the lamps. Here my faithful Indian servants were brought into requisition, and with lamps on their heads relayed the

line to the referring lamp-board, which fortunately, was found in its place

The position of Raheng having been determined I had nothing more to do than run a rigorous traverse to Kampeng, a distance of 40 miles, but I met with so much obstruction and local opposition that the cutting of the lines for which I had no assistance was abandoned, and from Kampeng to Nakawn Sawan a distance of 90 miles, a traverse with chain and compass was run. The rain had now set in, and the country was flooded in every direction. I had never been ill before, but the constant wetting now overcame me, and left me in a state of complete nervous prostration, which compelled me to return to Bangkok

The country between Raheng and Maulmein was for the most part hilly, the main watershed being distant in a straight line only about 15 miles The two towns were in direct communication, the chief path crossing the watershed at an elevation of over 2000 feet, while there were other paths used in the dry and hot weather, as affording better fodder for the cattle employed in transport work.

A considerable trade is carried on with Maulmein, and the ubiquitous Shans pass daily in great numbers, carrying Manchester and Birmingham goods to the most remote parts of Siam.

From Raheng to Nakawn Sawan the country is flat, and carts can be used The great highway, however, is the river, which, at Raheng, is over 2000 feet across, in the dry season its bed is nearly dry and the wide sandbanks are covered with hundreds of teak logs, waiting for the next rise of the water

Nearly the whole population lives on the river-banks, the villages inland being small, with few inhabitants The telegraph line has long since been constructed, but the portion between Raheng and the frontier is seldom in repair, and the alternative route from Bangkok to Tavoy by Kanburi is chiefly used.

When I returned to Bangkok an exhibition of all Siamese produce was in full swing in celebration of the hundredth year of the present dynasty, and in commemoration of the foundation of Bangkok. The exhibition was a very great success, and was thronged by crowds of good humoured people

The prospects of ever being able to work sufficient material for a general map of Siam were gloomy enough.

There was strong local opposition to any work of the kind, and

even under favourable conditions, very little could be done by single individual in so large a country as Siam. The King gave every encouragement, while Prince Damrong, the present Minister of the Interior, took an active interest in the work, and about thirty Siamese young men were selected for survey training. About twenty of these, however, were found to be utterly useless and had to be got rid of.

At this period the triennial tax payable by the Chinese had to be collected, and it was proposed to make a large scale survey of Sampeng, the most thickly populated part of Bangkok, its inhabitants being chiefly Chinamen. The place afforded an excellent training-ground for the young Siamese. The accumulated filth of years had silted up the canals, and the narrow streets were reeking with those intolerable stenches in which the Chinese seem to thrive, while the opium and drinking dens, and other haunts of vice, farmed by the Chinese were distinguishable by their surrounding *filth-heaps*.

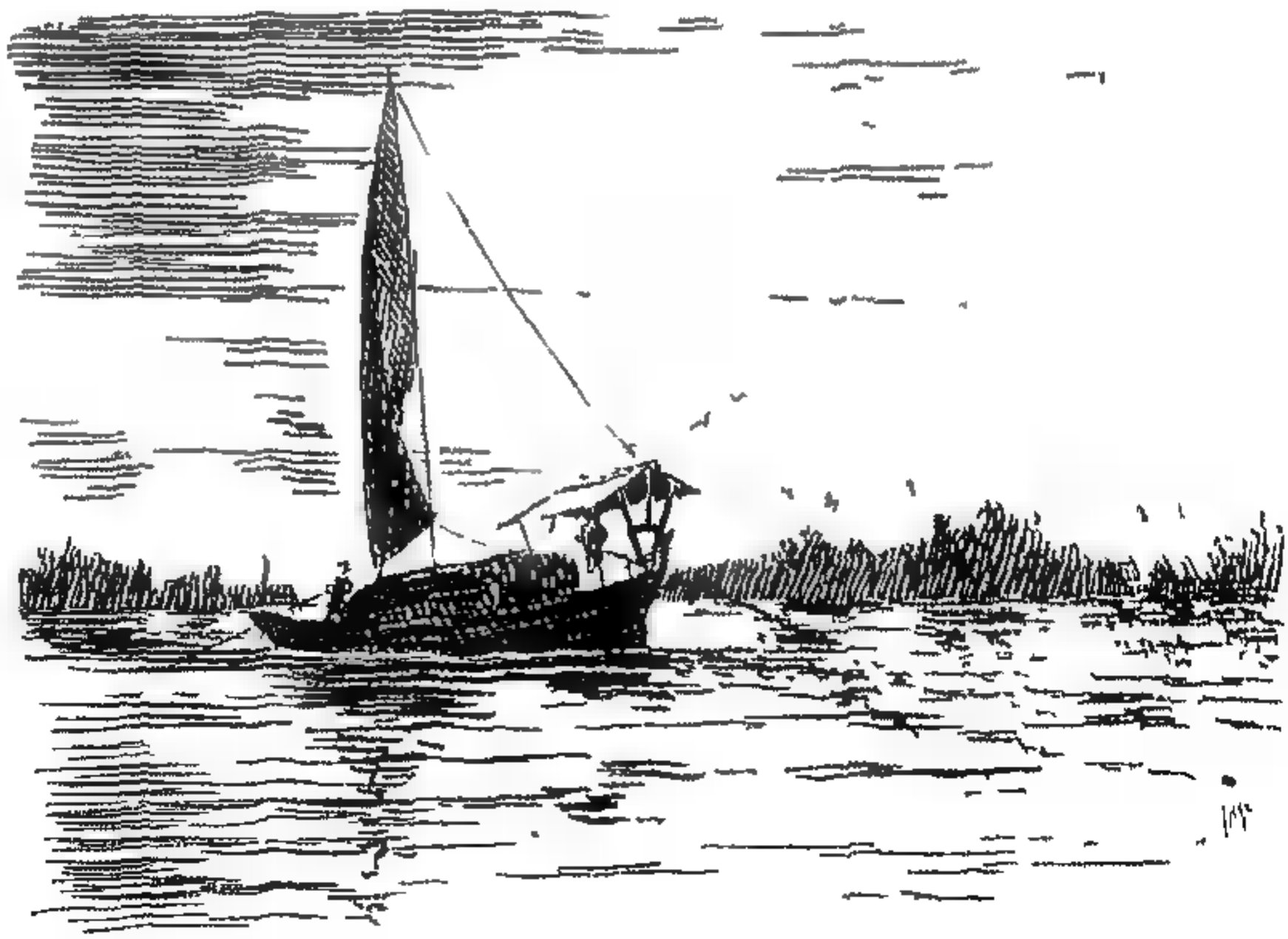
Gangs of about twenty Chinamen tied by a narrow cord wrist to wrist, under the charge of a Siamese official in no particular costume, but armed with a big stick, would pass down the street on the way to the lock up, where they would be detained until their friends came forward and paid the tax they had tried to evade. As all the Chinese belong to one or other of the numerous secret societies, it is not long before the taxes are paid, and the men liberated. The Chinese are the most highly taxed in the kingdom, being subject only to a poll tax of four ticals in three years. Judging from Singapore, which has a population of 150,000, it is not too much to assume that there are 300,000 people in Bangkok, and of these number the Chinese form nearly half.

Secret societies, carefully suppressed by the Chinese Government, and by the Governments of Hong Kong and the Straits Settlements, are a standing menace in Bangkok. In 1889 they started riots which were not suppressed until the military appeared on the scene.

Some of these societies had been encouraged as a set off against the native Christians, for it was always considered that the French priests were enrolling members of a similar association. When a Buddhist high priest, who had been a chaplain to the late Regent became a Christian, the one Chinese society then existing was fostered till it waxed too strong. Then another was started in

opposition, and now there are six of these lawless [illegible] endangering the peace and security of the whole community.

The Chinaman is a born trader and the [illegible] dealing with him. The consequence is that the [illegible] Sampeng, seen by few Europeans, are thronged with [illegible] and the little shop front awnings, meeting in the middle of the street make the heat more stifling to the half naked happy-go-lucky passers-by. Some are on their way to the pawn-shops to [illegible] property, perhaps your own hat snatched [illegible] you lend to evening before, others, to the Chinese temples to consult the oracles as to the lucky number in the next lottery, in which they have staked their all. After midnight the successful numbers are shouted through the streets by Chinese criers, who rival the parrots in making night hideous. Sometimes the crowd hurriedly makes way for a Chinaman, who rushes down the street brandishing a sword accompanied by others clashing cymbals and beating drums. They too rush into the temple and when I refer to my intelligent Chinese servant for an explanation he puts me off with "Chin chin cee makee do." Later we learn that the lot had fallen to this sword-brandishing Chinaman to take part in some ghastly performance in a Chinese procession, such as sitting on a sword with his back gashed open, or carrying a sword thrust through his cheeks.



ON THE NAM

CHAPTER II.

IN THE WESTERN TEAK FORESTS

WHILE the large-scale survey of Sampeng was being prosecuted I had to go north to map the country in the valley of the Me Tun, a tributary of the Me Ping and collect information about a disputed boundary line between the districts of Chieng Mai and Raheng. The dispute had arisen over the royalties to be paid for felling teak trees and the authorities of Chieng Mai complained that Raheng was again encroaching on their territory A stream was admitted to be the boundary, but the Raheng officials meant one stream, the Chieng Mai officials another 10 miles further south.

The Me Tun, rising amidst well wooded hills with great quantities of teak, flows in a southerly direction, and, after receiving the Me Same, doubles on its course, and, following a northerly direction, falls into the Me Ping

There is but little cultivation and few inhabitants, and such as there are belong to one of the many simple hill tribes of Karens who labour chiefly in the teak forests Amidst the ruins of Muang Tun, however, there are found evidences that the valley had at one time been occupied by a more settled people. At the time of my visit the teak forests were under the control of a Burman and there were lying in the Me Same about a thousand logs which could be worked into the Me Ping during the following rainy season The Burman, as trading Burmans usually are, was hopelessly in debt, and tenders having been invited for the purchase of the rights of the Burman to the forest, those rights passed into the hands of the Borneo Company.

The teak trees are 'girdled' that is, notches are cut a few inches deep round the trunk to kill them After three years they are considered well seasoned, and are felled Then the difficulties of having them transported to Bangkok begin

The Karens follow the usual customs of the hill tribes, and fell

the timber, clearing the hillsides for the cultivation of rice (a different grain from that sown on the inundated plain), tobacco, cotton Indian corn, and vegetables After two or three years the soil is considered exhausted then the village is bodily removed, and

HOUSE IN CHIENG MAI

clearings started in another direction, care being taken to avoid encroaching on the grounds of neighbouring tribes. In this way the tribe return in a few years to their old clearings The Karens are hardy foresters, and the whole of the teak in the Me Tun is worked by them.

At the time of my visit to the Me Tun valley the head Karen was wanted in Raheng, and instead of dealing with the man, a long series of manœuvres, in which I was unwittingly involved was employed to secure his appearance The whole scheme was worked by a man who had the administration of the borderland, but was reported by the Governor of Raheng as a murderer and was known to the British authorities across the border as the head of a gang of dacoits

I had only a Chinese servant with me, and we had a very rough time of it The elephants and drivers ran away, so that I was without transport, and some ruffians would prowl about at night amusing themselves by firing shots Fortunately, I was ill of fever or might have been forced into violent action At last an elephant was procured, but the pads having been covered with filth, the stench was unendurable Determined to push on, I started walking, though suffering from a raging fever, in a broiling sun. The constant wading in the water had reduced my shoes to a pulp, and it was a relief to throw them off and walk barefooted The path was very rocky, and it was not until after dark that I came to a halt and lay on the bank of the stream, completely exhausted, with my feet frightfully lacerated

The others followed in my track but it was near midnight when they reached the spot where I was lying, a helpless heap of pains and aches I was carried into Raheng where fortunately, falling into the hands of Mr Stevenson, a timber-trader, I met with kind care and attention Fever had now established itself in my system, and became my annual companion

BUDDHA

CHAPTER II

IN THE MALAY PENINSULA—SIX ORA AN—AN

I HAD barely recovered from my fever when I started on an expedition to the Malay peninsula. A dispute had arisen about the correct boundary-line between the British Protected State of Perak and Patani, but it was difficult to locate the disputed territory. The Government of the Straits Settlements having put forward the claim, it was found that they were referring to the same territorial division as had existed some forty or fifty years previously, and were unaware that the State of Patani had been subdivided by the Siamese Government into seven minor states which are mentioned below. It was now found that the disputed territory was in the State of Patani.

The preliminaries being settled Mr George Bush accompanied me, and we went on board the *Narrow Beam* where we met the Siamese commissioner, Phra Pichai Sawug Kram. The captain of the steamer was a Cambodian Malay who had been refused leave to go on a pilgrimage to Mecca.

He was not in the best of tempers and plead that he was totally ignorant of the west coast of the Gulf of Siam. To make up for the want of local knowledge, he had an admiralty chart of the coast of Nova Scotia.

We found no access could be had to the cabins of the steamer, as the keys were said to be in the palace, so we did the best we could on deck, not too well protected from wind and rain. The Malay captain having explained to the Siamese commissioner that he knew nothing of the route along the west coast of the Gulf, it was arranged to strike west from the lighthouse, and, anchoring at night, to steam closely along the coast during the day.

A bold coast line is always grand, but feelings of admiration for the coast-line of the Gulf of Siam are somewhat modified by a

knowledge of the loneliness of the forest clad mountains and the fever that lurks there. The Sam Roi Yawt, or "three hundred pinnacles" of limestone, form a beautiful picture, but do not possess a human inhabitant, and the voyager is always reminded that it was on this coast that the late King of Siam contracted a fatal fever when he accompanied a party of European astronomers whom he had invited to make observations of a total eclipse of the sun in 187

We cast anchor off Champawi where, it may be said, the Malay peninsula begins. The little harbour was full of rocks covered with oysters. The usual cocoa-nut palms and grass shanties marked the position of the village.

A few months before my arrival some French engineers had visited the place with a view to making it one of the entrances to a ship canal designed to pierce the peninsula, the highest point of the intended route being 250 feet above sea level.

On June 15 we anchored off Sungkla, or Singora, and remained there a few days, waiting for the acting governor, who had been appointed a boundary commissioner. We landed in the midst of holiday-making in connection with the cremation of the late P'ra Santara, and there was a great display of bunting in every direction. Sports were also the order of the day, and included boxing competitions in the native style. Kicking was permitted and freely indulged in, and it was surprising to see with what force and dexterity a man would land a foot on his antagonist's jaw. There were also some buffalo fights. The horns of the combatants were highly polished, and the animals were goaded on by their keepers, to the intense delight of the crowd, who yelled frantically whenever one was gored to earth.

Covering one side of the reception hall of the governor's house was a beautiful work of art in brass relief, representing 'The taking of Singora.' The grandfather of the present governor came from Amoy about the time of the founding of Bangkok, and, attacking Singora, captured it from the Malays. The Malay coast offered an easy prey to the venturesome Chinese in their junks, and both the east and west coasts of the northern part of the peninsula were brought under their influence.

The Siamese provinces of the Malay peninsula with Malay governors are Keda or Sai, Kelantan, Tringanu, and the following subdivisions of Patani: Tani, Nawngchik, Yala, Yaring, Saiburi, Panga

o Lege and Raman The subdivisions of Patani and the tributo— trees, gold and silver through the Governor of Singora to Bangkok, the other states send theirs direct

We steamed from Singora to Patani, and anchored a long distance from the shore, and proceeded in shallow canoes up the Patani river to the Chinese town, which consists of a number of houses packed within high brick walls, enclosing an area of about 600 feet long and 200 feet broad

The rajah's house was about a mile and a half further up the river. The rajah, a youth of about twenty years of age, was in Kelantan for his marriage to the daughter of the chief of that province

There was a large area that had been under rice cultivation, over which cattle of an excellent breed were grazing, there were also some sheep, which surprised me as I had always accepted it as true that sheep did not thrive where bamboos grow The trade was entirely in the hands of the industrious Chinese, and consisted principally of lead, tin, gutta percha, ivory, and hides Opium was smoked to excess by everybody high and low

To carry on survey work, accompanied by old fashioned Siamese commissioners, was an arduous task Those associated with me were suspicious, and were always exercising their own cleverness and my patience by obstructing the progress of work, which had to be adapted to circumstances As the line of country over which we were to proceed was nearly north and south, I adopted the plan of observing for latitude, determining the azimuth of the next forward line to conspicuous peaks and surveying the routes between

A MALAY PENINSULA ANCHORAGE

CHAPTER IV

THE MALAY PENINSULA—WORK IN RAMAN

THE jungle was very heavy and on the banks of the river appeared impenetrable with the bright green, palm like leaves of the creeping cane binding the trees together. Bush and I took a small boat, and were poled rapidly against the swift current of the Patani river. At nightfall we pulled up usually at some sandbank affording conveniences for running up a kitchen range, which consisted of three sticks driven into the sand, so as to support a pot, the fuel, always abundant within hand-reach, being lighted between the sticks. Our little tents were pitched in a few minutes, and some smooth stones from the river put over the tent pegs prevented them from being dragged out of their positions. In the morning we breakfasted, struck tents, and were on the move again before daylight.

We reached Ta Sap, the revenue collecting station for the Raja of Yala. There some excellent houses had been built, and Bush and I took up our quarters in one of them. It was well we had so far anticipated of every precaution taken in sending men on ahead to arrange for transport, nothing was ready, and we had to make up our minds to delay.

Near Ta Sap there are some interesting caves in a small limestone hill, very steep, and surrounded by a deep lake of muddy water containing several varieties of lotus. At the foot of the hill, and approached by a long bridge of floating bamboo, are the houses of the priests. In the Malay peninsula the common mode of conveyance is by means of a double pannier slung on the back of the elephant, a few raw hides being placed under the saddle. Having engaged an elephant that I might cross the deep and ply pole to the caves, I got on one side of the pannier, and my Chinese boy," Ah Fuk, on the other, to act as a counterpoise. Some one was shooting small birds hard by, and at the report the elephant bolted, rushing

over what was, fortunately, open country. When we had come to a standstill I asked A Tuk who fired the gun. He pointed out a countryman of his own, adding, 'That damned China makee fire.' Having crossed the lake, we left the elephants, and ascended to a cave, which was 180 feet long and 50 or 60 feet high, with fantastic canopies of stalactite, such as are usually found in limestone caves. There was a reclining figure of Gautama about 30 feet long, partly hewn out of the rock, and partly built; there were also nineteen sitting figures of Gautama, but all were of modern construction. Adjoining was a dark cave full of bats, from the dung of which saltpetre was collected. From the mouth of the cave we obtained a magnificent view of a region where villages were hidden among fruit trees and cocoa nut and areca palms, surrounded by wide tracts of paddy fields, the whole being backed by a range of mountains.

On July 4 we moved over to Kotabaru, a four hours' walk, to the residence of the Rajah of Raman, who had the reputation of being a good sportsman. Above Kotabaru was an imposing hill, or mountain, called Bhnyaw, about 4000 feet high, and covered with forest to the top. I arranged to ascend and clear it, and the rajah gave me a couple of favourite huntsmen as my companions. I had, besides, twenty good Malays each provided with an axe. The moment the ascent was begun, the forest and jungle were so heavy that nothing beyond could be seen, and the frequent ascents and descents over the spurs were such as would surely have puzzled the novice at climbing. Many a knoll was declared the top of the mountain, but nightfall found us still on the side.

We cleared the jungle near a crystal stream, and pitched our tents, and settled for the night. The vegetation was in great variety and included many kinds of ferns, from the delicate maidenhair to the gorgeous tree fern. The birds were numerous, and more than once we disturbed the lovely Argus pheasant. In echoes with the cries of the gibbon was the monotonous call of a horn bill, which the Malays liken to the sound of chopping wood, and legend says the bird has the spirit of a lazy and disobedient wife, condemned to be eternally mourning her disobedience. At sunset the noises of the insect world were thrilling, and one wondered how the little creatures made the din. The next day we reached the top of the hill, and it took two days' clearing before we had a good view. The labour was well rewarded. Before us lay the long tract of sea coast from Singora

to Kelantan, with a few isolated hills which varied the monotony of the low lying fertile coast lands. The plains were seen narrowing into river valleys which stretched far inland, until cultivation was lost in thick impenetrable forests extending to the mass of mountains which form the backbone of the Malay peninsula.

The published maps of this region showed all its chief rivers flowing into the Straits of Malacca on the one side, and into the Gulf of Siam on the other, as connected together in some wonderful hydrographical formation. The region, however, contains the highest mountain in the Malay peninsula.

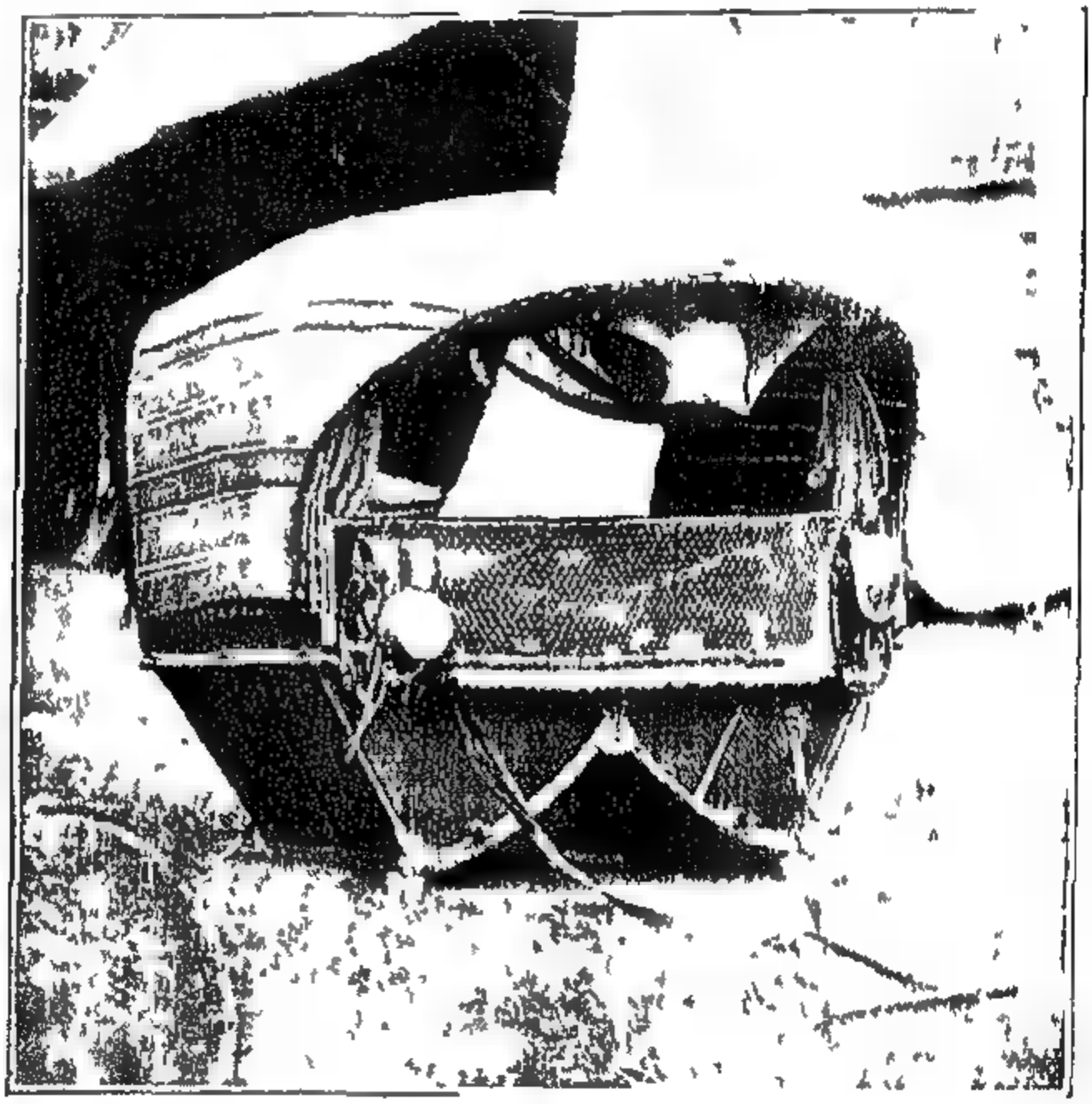
After completing the work on the hill, including observations for latitude and azimuth, instead of returning to Kotabaru, a course which would have involved delays, we proceeded over the mountain, and struck the path leading from Kotabaru to Yaom.

We there found a regularly made road about 9 miles long, a monument of the industry of an English company that had been working rich tin mines, now in the hands of industrious Chinese.

Going down a steep path, one of the transport elephants made a furious rush on another and overturned it, so that it was a miracle my "boy," A Fuk, was not killed. He was smoking opium as usual, and the shock sobered him.

On the 3rd August, at Yaom, I had the pleasure of meeting Mr. Bozzolow of the Perak service. He had come to prepare quarters for the reception of Sir Hugh Low, the Resident of Perak, who was accompanying the regent. In a few days Yaom became a centre of great activity. The Raja of Ramu, a very big man on his own elephant, headed a procession of fifty-five others, and their arrival fortunately enabled me to get some men. We ascended a high hill in the vicinity called Angus. It was very cloudy, and I had to sit up the whole night before I could make any suitable observation. Star after star was timed for ex-meridian observations, but at the critical time each was obscured by clouds. The morning was beautifully clear, and for the first time I had a view of the grand mountain at the head of the Palong and Perak rivers. The height of this mountain I made out to be over 8000 feet above sea level. Its forests are the last refuge and home of that interesting wild tribe of Negrittos called Sakais. The Perak river is said to divide the Sakais from the Samung. All are called by the Malays Orang Utang ("wild men").

The Sakai is very similar to the Annamese except that he is taller; he has very black, smooth skin and wool on the head. The Samung has straight coarse hair, and a very black, rough skin. Each has the same restless expression in his eyes. They are thoroughly wild and do not cultivate the soil or build houses, but wander through the forests in search of fruit and game, leave little or no trace where they sleep and are not encumbered with covering of any form. A few sometimes venture to the Malay villages, and



I. A SUBURBAN ELEPHANT HOWDAH (FACE VIEW)

exchange canes and rubber for rice, and they have been known to work for dollars. In Perak some have been induced to settle in villages.

On August 22 Sir Hugh Low arrived at Yarom. He was riding on an ordinary elephant saddle with his cloak on the opposite side to balance him. In Perak they seem not to have cultivated the comforts of elephant travelling, for there the panniers are slung across the elephants backs without any covering whatever. This simplicity allows to the rider an unimpeded view, but in the Malay peninsula it is not from the back of an elephant that any view is to be

expected such as might compensate for exposure to wet and to the thorns of the jungle

The Malays learnt the art of elephant taming from the Siamese In the neighbouring state of Selangor the elephant was not tamed, nor in any state not under the direct influence of the Siamese

Sir Hugh Low had conferences with the Siamese commissioner, and, I understood, claimed that the main watershed was the proper boundary of Perak On the 25th the conferences came to a close, and on the 26th Lieutenant George Caulfield of the Perak service and Bush accompanied me to explore as far as possible the region between the main watershed and the present boundary.

About sunset a sound as if of heavy cannonading was heard, and continued all night and the next day. A Malay explained it as being a battle of devils in the atmosphere It was actually from the explosions of the eruption of Krakatoa in Java

Crossing the main watershed, we descended into the valley of the Perak river The paths were over very rough country and through heavy jungle, only one small village being met with until we reached Balom, near the head of the river Balom is a collection of the usual Malay grass huts, and is on the road between Lege Kelantan and Perak

Surveying is often very trying work, as for success it depends on the state of the weather, and, in a rainy country such as this, requires constant change of locality To keep the party on the move when away from the beaten track is tiresome and difficult. Caulfield accompanied me up a mountain near Balom, and it was lucky he did so, as my Malays remained behind, causing much trouble to Bush, who brought some of them up at eleven o'clock at night Caulfield thought it better to separate the next day, as, he being a Perak official, it was evident the Malays were making his presence a pretext for obstruction, and I was sorry to lose his genial companionship. Completing the work on the hill, I descended to Balom, and immediately set out to explore the upper waters of the Perak river

The first march took us through a gold-mine, where there were some clever Chinamen who had had experience in Australian mining On a perpendicular bank of red clay about 30 feet high showing nodules of slate, quartz, sandstone and granite, there played a jet of water, and the material thus washed into a ditch below was

worked by men by means of their feet and non l ns The wate and fine silt were drained off to the river, and the residue examined for gold

The main branch of the Perak river is a succession of deep pools; but as the jungle was dense, and we had no men to help in clearing a path, we followed the river bed, sometimes swimming, while over n our baggage elephant fared badly We saw traces of ancient gold mines gigantic workings, abandoned no man knows how long ago. There was a path connecting the Balom old mine with the at Tomo in the valley of the 'Telo' en, which is also worked by Chinamen. These miners were resisting the levy of the taxes imposed by the Rajah of Ranga (or Lege) The Malay chiefs have no means of enforcing their authority except by cutting off supplies, and as the Chinamen at Tomo received supplies from their countrymen at Balom, they were able to defy the rajah

It was getting very late in the season, and our progress was too slow, so we constructed light bamboo rafts and floated down to Balom, which we reached at 10 p m The next day, September 25, we set out from Balom, but the whole forenoon was wasted, and the elephants did not start till the afternoon The day was wet and miserable, and the camp was not reached till after dark Towards morning one of the Malays was carried off by a tiger Hearing his cries for help, I ran out to inquire what was the matter, and finding everything quiet, I concluded that some tomfoolery had been going on Then, in the darkness, the men began calling out each other's names, and it was ascertained that a man was missing He had been dragged out from among six others who had been sleeping under the semi-cylindrical bark covers of the elephant-saddles Mahomedans have a horror of not being buried, and as the man had proved himself an excellent fellow, I determined to recover his corpse at least. At the break of dawn we followed the tiger, guided by the marks of blood on the bushes; and when we came to a rank old bushwood we knew from the strong smell that we had tracked the brute down Two of the Malays who were with me could be thoroughly relied upon, so we crouched and forced our way through the brushwood The tiger, slinking off, dragged the corpse of his victim for about 30 yards down the slope of a hill, and abandoned it in a dry ravine. We carried it back to the camp, and it was buried by the hands of friends The companion who had been

sleeping near the man having turned grey in a night and lost his voice, was sent back on an elephant to his home.

We constructed rafts, and floated down the Perak river for five days without meeting any inhabitants.

At Kwala Tamangaw the river was choked with great rocks, so that our frail rafts could proceed no further. I therefore abandoned them, and went overland to Krone, the headquarters of a petty rajah.

All rivers among mountains are beautiful, and luxuriant growth on river banks makes a pretty picture; but there is not much poetry left in a man after he has been many days hacking his way through heavy jungle.

From Krone I went to Itan, where there were a hundred Chinese. In this place, which is a regular death trap, the graveyard seemed the cleanest spot, and I pitched my tent near the tombs. The workmen come, or, rather, are kidnapped, from Amoy, and I very much doubt if they ever leave the mines. Most of them were covered with large ulcers, attributable to the lead in the water. The Chinese seemed rather opposed to the idea of paying taxes, on the ground that there was no protection from robbers, nor any proper road or communications. We pushed on to Kro, a plateau about 1000 feet above the main sea level. The river is very sluggish, and when joined by another, the Sungi Rue, cuts its way underground.

I had now completed the work, and got a clear idea of the claims of the Perak Government. The region claimed by Perak extended to the main watershed; that claimed and actually administered by Raman extended to Jugin Panjang (the Long Rapid) on the Perak river, the boundary line following the well defined mountain spurs east to the main watershed, and west to Gamung Inas. Thus Perak was claiming about 2000 square miles.

Fever having again taken hold of me, I went down the Baling river in a small boat in Bush's company, and was placed in the hands of Dr. Hampshire of Pinang, under whose care I was able in a short time to proceed *viâ* Singapore to Bangkok, which place was reached on November 1.

CHAPTER V

START FOR THE NORTH EAST FRONTIER—TOP-KNOT CUTTING

I NOW began preparations for leaving Siam, since, however enthusiastic I may have been, there was little prospect of my ever being able to accomplish anything of importance My chief difficulty had arisen not from the climate or from the rough life which every one engaged in work of this kind experiences, but from the opposition of the officials placed practically in charge of the expeditions. These people looked upon me as a superior sort of attendant, placed in the suite to swell their own importance, and, as my idea of my duties and theirs of their importance did not run in the same channel the consequence was a great deal of friction, in which, of course, being a single individual I was the sufferer, and was usually worried into a bad fever

The fascination of the king was, however, too great, and I soon found myself preparing for another effort in his service.

Contradictory reports frequently reached Bangkok concerning ravages by Haw on the north east frontier of Siam, and as villages were now reported to be plundered and destroyed, the whereabouts of which puzzled the heads of those who ought to have known, the king was graciously pleased to appoint me to the command of an expedition to the region of disturbance Though fully alive to my own deficiencies, I saw that here was an opportunity which ought not to be neglected, and I set eagerly to work to do the best I could. For geographical research, especially, the frontier region provided a wide and interesting field, for the greater part of it still remained unvisited by Europeans, and [illegible] the maps the country was a blank

As the district over which we had to work was infested with robbers, an escort of two hundred soldiers was sent, under the

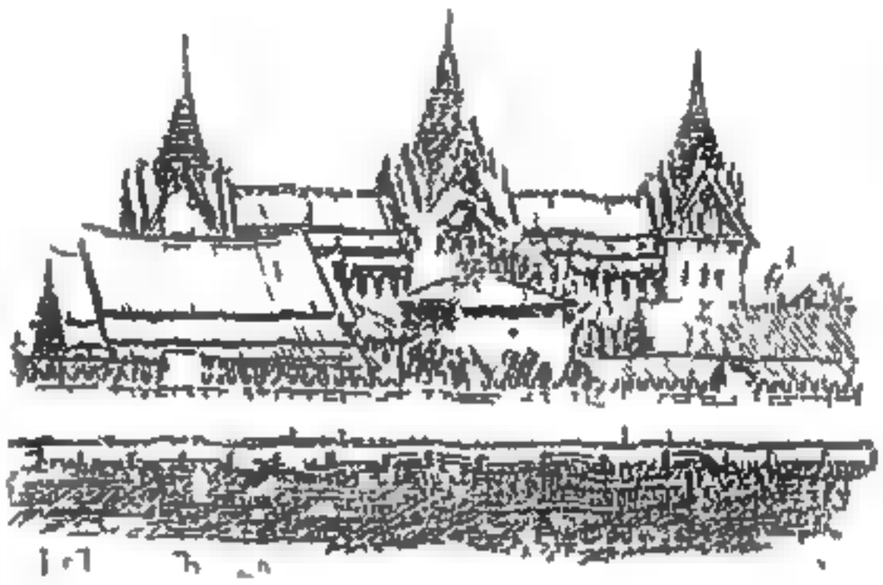
command of Leonowens, who had been fretting over his inactivity as head of the local cavalry

Bush was very anxious to go, and urged his doctor to recommend that he should accompany the expedition I had also seven Siamese gentlemen taken from a number I had trained to surveying

The next thing was the selection of a lucky day and hour for our departure In Siam the days and the hours have a strange influence on the actions of men, and I have seen a Siamese official seated solemnly on the back of his elephant, intently watching the minute hand of a fifteen shilling watch, so that he might be able to give the word to march at the precise minute.

We started at noon on January 16, 1884 The day was a particularly lucky one It was high festival time, the festivities being in connection with the hair cutting of three princesses, daughters of the king The hair on the top of the head of the better classes of all Siamese children from infancy is carefully attended to. It is neatly made up into a knot fastened by an elegant gold pin and usually encircled with a wreath of white, scented buds, which adds a most pleasing effect to the innocent and gentle expression of the little children's faces The age of eleven or thirteen is that at which the ceremony of hair-cutting is performed which merely consists in shaving off the top knot, the object of the mother's solicitous care for years In the life of a girl, next to the wedding, this is the greatest event, and all friends and relations invited usually bring presents of money or jewellery, which are carefully put by and go towards her dowry at marriage. Such an event in the life of a princess is one of extraordinary festivity, extending over at least a week To attempt a description of any single part of the ceremony would be to invite failure As a spectator, you catch the common feeling of the crowd, mute and dazed, as the pageant advances, and you settle down in sympathy You observe a number of Siamese officials of the first families, dressed in flowing white muslin robes, and tapering tall, white hats These men are supposed to represent Brahmin priests They are followed by girls dressed in cloth-of-gold, holding golden lotus flowers; then come the young princesses, richly arrayed in cloth of-gold, and carried aloft on a heavily gilt and jewelled throne The rear of the procession is brought up by women of all nationalities, subjects of the King of Siam, dressed in their national costumes — Malays, Burmans, Cambodians, Cochin Chinese, and

natives of Annam Lastly, the king, dressed in state, receives the princesses at the Royal Pavilion All this display is only preliminary to the great event, the actual cutting of the hair This ceremony is performed by the king, who cuts off a lock, and by princes, who complete the operation by shaving the crown of the head



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CHAPTER VI

FROM BANGKOK TO KORAT ELEPHANTS

THE Me Nam Chao Praya is a magnificent river. Me Nam is a generic term, *Me* signifying "mother," and *Nam* "water," and the epithet Chao Praya signifies that it is the chief river in the kingdom of Siam. The river always commands the admiration of the visitor fresh from Europe, but no matter how familiar it may have become, it has always some new interest or creates some impression not recognized before. The low banks fringed with fruit trees; the cocoa and areca palms gracefully swaying to and fro over the wooden houses that nestle in the shade, the gilded *wats* (temples) glittering through the leaves like a daylight illumination, the graceful pagodas occasionally peeping through the trees, form a varied scene that is most striking and beautiful. Enormous rice-fields stretch away towards the horizon, and are bounded by the outline of the fantastically shaped limestone hills of the sacred place of pilgrimage, Pra But (Gautama's "footprint"), and of Lopburi.

A steamer once in the channel can, day or night, steam full speed to Bangkok without any fear of shifting shoals, and in this the Me Nam differs from the rivers of Burma. Only steamers of small draught (12 feet 6 inches is the limit) can cross the bar. The dredging of a channel to enable ships of heavy tonnage to come up to Bangkok has been advocated by some, while, on the other hand, there are those who say that the change would permit such a flow from the sea as to render the water at Bangkok unfit for use. It is a well known fact that, occasionally, when the rivers are at their lowest, just before the rainy season begins, the flood-tide renders the water brackish for some distance above the city, and widespread sickness is the result. This happens practically only when the rainfall of the previous year has been deficient.

Towards evening the towers of Bang Pain came in sight, and we came to anchor there for the night

Bang Pain consists of two islands, on the one is the palace of the king, and on the other a Buddhist church in the Gothic style, with stained windows, pews, and altar complete The place had enjoyed royal favour as far back as 1631, in the reign of Chao Prasat Tawng. On the island now occupied by the palace there had originally stood a humble building which the late king had called his "sleeping box." He had been very much attached to the spot, had planted it out with mango-trees, and had escaped when he could to this peaceful retreat for rest from the cares of state

The present king, out of reverence for all that his father had loved, adopted the place for his holiday resort

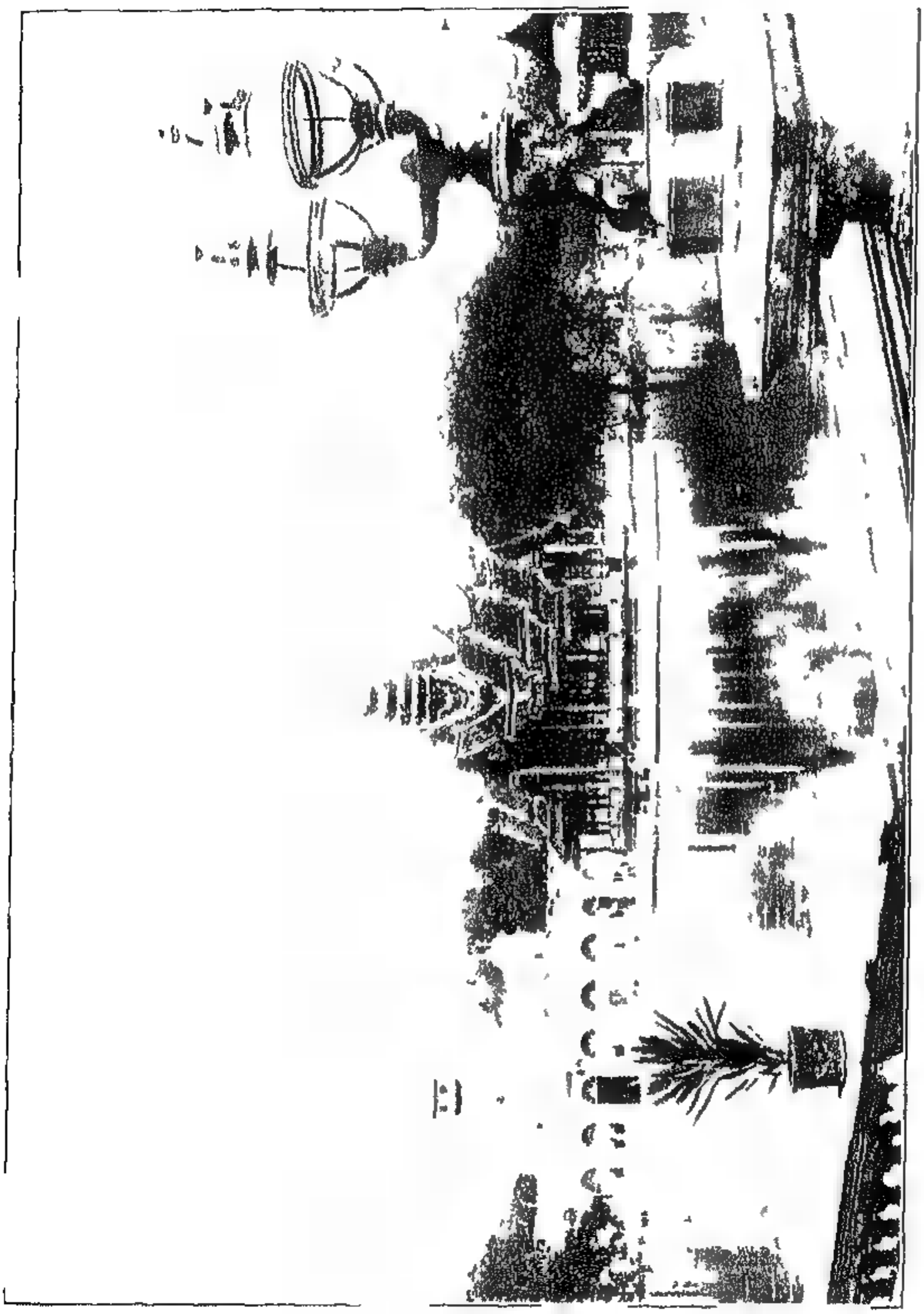
As we proceeded on our way up stream the flat stretches on either hand were seen to be covered with rice fields, while the river was alive with boats, which, with their white sails, looked like huge birds floating on the water The banks in some places were riddled with holes, the nests of a speckled black and-white kingfisher, and of a green and rather large species of fly-catcher These holes go as much as 8 feet into the bank Some are on its perpendicular face, others are within easy reach of snakes, but the inhabitants tell me that the snakes do not enter the holes, as they are perfectly straight and narrow, and if a snake got in it could not get out. The birds appear perfectly happy, as though they knew no danger, and the two species seem to live together in harmony and peace

In the evening we reached Ban Sak Dang, beyond which steam-launches could not proceed This was the landing-place for Prabat Preparations were being made for a visit of the king, and a broad road was being cut and cleared of jungle

The Prabat, or sacred footprint, is a hole about 5 feet long, and 2 feet broad in a limestone rock a short distance up the side of a precipitous mountain. It is surmounted by a small square temple of the kind called Maradop, the floor of which is covered by a mat of plaited silver wire Year after year the spot is visited by pilgrims, some of whom explain that it is not a footprint, but merely a symbol of religion Leaving the launches, we rowed along the river, which was now twisting in all directions between steep high banks

We reached Saraburi on January 18 Our river journey was now ended, and the trudging was to begin

Saraburi is the capital of a considerable district but there is in all Siamese towns beyond the *wats* and pagodas there is nothing



PAVILION AT PANG PAPUTAI

of a permanent character The dwellings are bamboo shanties and timber houses, the governor living usually in a house of the latter

description No Siamese town has a settled appearance, the people seem to have inherited the roaming propensities of their forefathers, who, constantly engaging in war and either plundering or being plundered, seldom had time to become the founders of cities

With the railway now running to Saraburi, it is impossible to realize the tedious preparations that were formerly necessary to secure transport.

For those who travel in Siam otherwise than by river, elephants and bullocks are the principal means of transport The services of the elephant are absolutely indispensable to human welfare, and it is not strange that that animal should have come to be regarded as a national symbol The albino, especially, is made much of

Tourists who go to see the white elephants at Bangkok are disappointed to find none of the palace like stables, the gold dishes, and the rites of worship, of which the accounts of earlier travellers are full The romantic descriptions have no counterpart in the reality The white elephant is not white at all, but dust coloured

The expert tries to persuade the tourist that the colour is somewhat ashy, and draws attention to the pink eyes and to the white toe nails. But all in vain, the disappointed traveller, looking at the very ordinary beast before him, asks almost incredulously whether this is the celebrated white elephant renowned in ancient story

The Siamese divide elephants into three classes for general purposes great, middling, and small 4 Sok 1 Kup (90 English inches), 3½ Sok, and 3 Sok. The first is put down as being good to carry 530 lbs ; the second, 400 lbs , and the third, 250 lbs , these weights being for flat roads for mountainous country less These, of course, are nothing compared with the loads of over 1000 lbs the Indian elephants carry in an ordinary way There is no difference between the elephants of India and those of Siam A great number of the latter are worked in the Indian Commissariat Department, and they are not to be distinguished from their Indian brothers. In India an elephant is better able to do his work because he is better cared for, and the pack saddles for the baggage are much better. The Siamese elephant is more or less wild, and breeds freely in so-called captivity

During one of my marches a baby elephant was born, and the whole transport was disorganized I had five elephants, and the mother had enlisted the services of two other females to help her in looking

after the baby, so that I had to come to a halt and make new arrangements. When born, it was thirty inches high and scarcely as long. In a couple of days the little thing was quite lusty, and the three elephants were always near. It basked and slept in the sun, but if it suddenly awoke, the three rushed forward, and taking up their position round it, stood with trunks uplifted ready for the charge.

The Siamese howdah is well adapted for comfortable travel, for it gives protection from sun and rain, and from the jungle when the elephant is crashing through it. It also provides a splendid berth for the night, being well raised above the ground.

The average height of the full grown elephant is about 90 English inches, but I measured one that I once had with me, and found him to be 110 inches to the shoulder. One in Bangkok, 'P'ra Prap,' was 105 inches high, his tusks crossed one another on the ground, and were ninety six inches in length. Sometimes he was highly mischievous, and thought nothing of overturning a water cart, or tossing a man several yards for amusement.

The bullocks look miserable beside the elephants, yet a great deal of the transport of the country is carried on by their means. These useful animals are controlled by a string through their nostrils, double panniers of cane being slung across their backs. Some have their faces covered with bear and tiger skins, decorated with shells and looking glasses, with a plume of peacock's feathers to complete the head-dress. Sweet toned bells are fixed above the panniers and wherever one journeys the sounds of the bells are heard. It is said that the bullocks know the tinkling of their own drivers, and the keepers in the evening call them into the camp simply by sounding the bells.

Along the route from Saraburi to Korat there was nothing of unusual interest except the forest known as the Dawng P'ra Fai, or forest of the Lord of Fire, which is known for its deadly fever. There hundreds of Chinese labourers were buried during the construction of the railway, and hundreds more will be buried before it is completed.

In the early morning of January 30 we marched into Korat, the crenelled red-brick walls of which called to mind Chieng Mai, Lampun, and Lakawn. We knew at once that we were entering a Lao city, and the inhabitants were aroused from their slumbers by the martial notes of the bugles and the steady tramp of the soldiers.

CHAPTER VII

KORAT—HIV AND HUNS

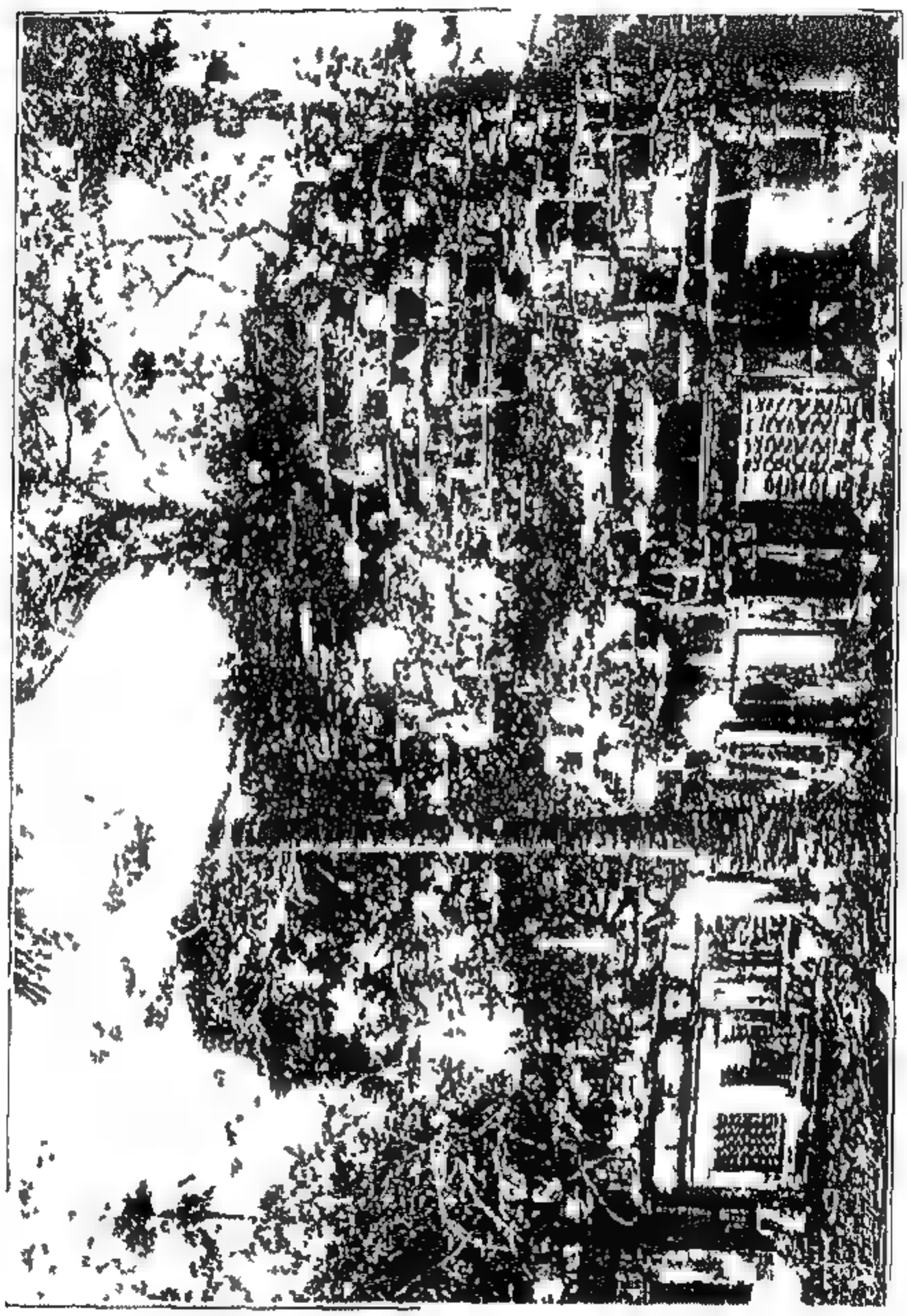
By eight o clock we had taken up our quarters outside the town, and later on we called to see Phra Rajanarakun, a Siamese general who was in command of an expedition Presenting the letter of introduction with which Prince Damrong had provided us, we were received with marked cordiality, and it was evident that the prince s letter contained an eloquent appeal on our behalf, especially urging the general to render us all such assistance as Europeans, imperfectly acquainted with the Siamese customs, might require.

Phra Raj told us that it was his father, the late Minister of the North, who had commanded the expedition against the Haw some ten or eleven years before, when he had been sent as head of the advanced section of the army, and had destroyed the principal position of the Haw, at Tung Chieng Kam

We accompanied Phra Raj on a ride through the city, the walls of which are enormous monuments of labour, but have a general look of decay There are four principal gates, that on the south, called the Pratu Pi, being the gate through which corpses are carried, is in general superstitiously avoided, but Phra Raj laughed at such notions, and we went through

The north and south sides of the city according to the governor's statement, are each about 5400 feet long, and the east and west sides about 3200 feet On the south side there are three small forts, each with 15 loop holes, while along the wall there are 1400 loop holes and 73 crenelles On the north side there are four forts, 107 loopholes and 60 crenelles, on the east and west sides two forts and 861 loopholes along the wall The walls are protected with earth of considerable thickness, and the berme is about 15 feet from the level of the road. The whole city is surrounded by a moat about 200 feet broad

We passed through the western gate, and came on the Chinese quarter, where there were about 800 Chinese residents, with, as usual all the trade in their hands, and all the villainy too, gambling drinking, opium smoking, and the other vices being left to their control



WAT YOMRAJ KORAT.

The head Chinaman said an improved road between Suburin and Korat would benefit the country greatly, and considerably increase trade, the chief articles of which were rice, sugar, hides, and horns

Rice-fields surrounded the city walls, and to the north there is salt water from which large supplies of salt are obtained The

water of the river, the Klawng Boribun, a short distance to the north, is brackish.

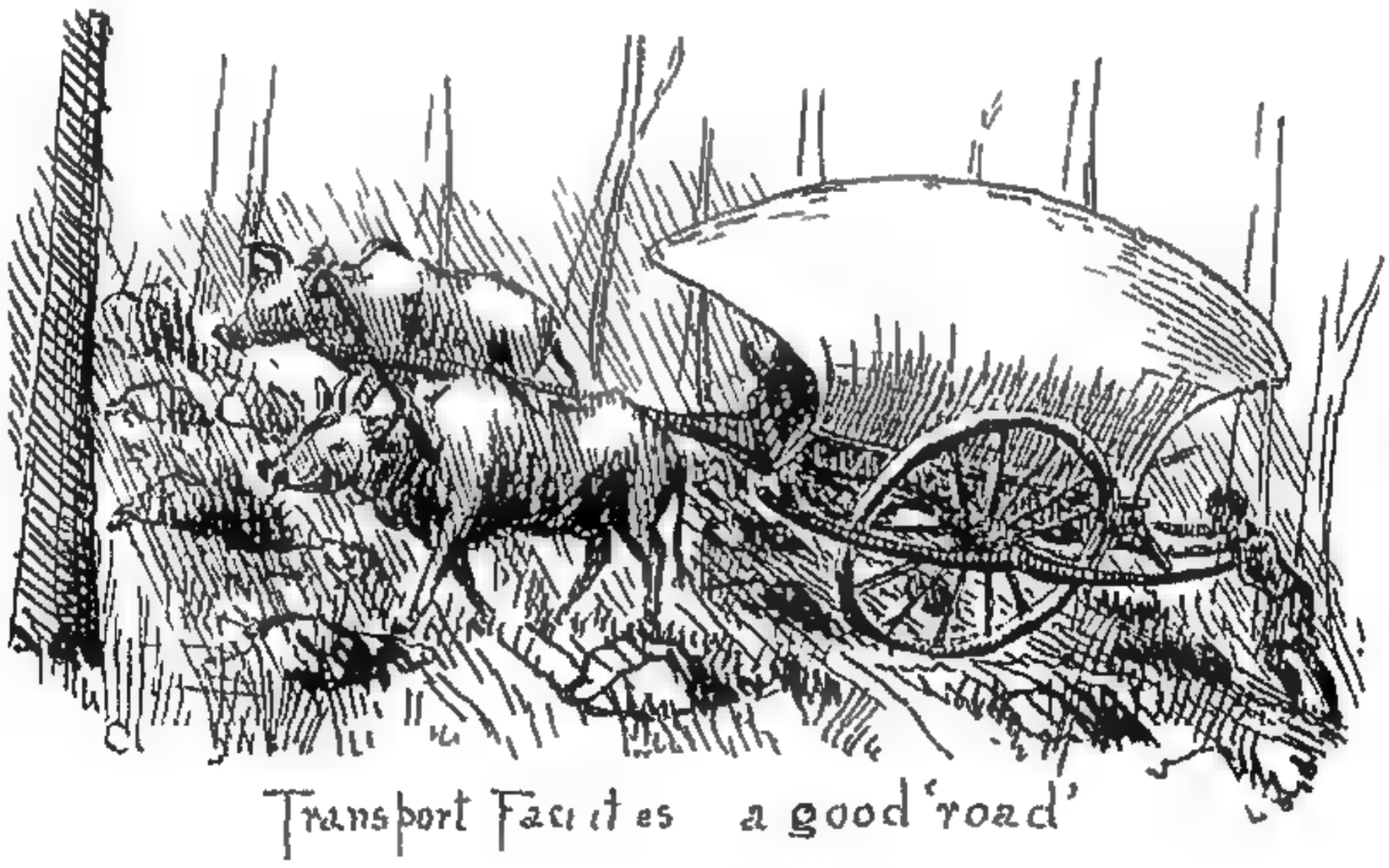
The ruins of Wat Nomwan, less than two hours' journey from Korat, though not extensive, are very striking, and well repaid our visit. The temple itself is within a square enclosure, the walls of which, 200 feet long, are formed of rectangular blocks of stone (apparently sandstone) about 8 feet long, and 2 feet deep, and 3 feet broad, now tumbling in confusion. Each stone has circular holes a few inches deep, and the faces are perfectly smooth, without a trace of the stone-cutter's chisel. The gateway to the east is very elegant, with a plain cornice, and one block looks like the remains

WAT NOM KORAT

of a fluted pillar. Lying on the ground are slabs which seem to have belonged to an ornamental doorway. One of the carved figures is a toad with human teeth, while the heads of two snakes are calmly lying one at each corner of the toad's mouth. Carvings of flowers are interwoven in elegant designs. The temple itself consists of two portions connected by a covered way, that to the east being apparently more ancient than the other but of exactly the same dimensions and style of architecture. The blank windows contain ornamental columns of stucco which have a strange appearance, and seem to be of much more recent date than the building in which they are set. The inside of the temple is vaulted, but no plaster is

visible The vault consists of slabs of which the higher overlap the lower. The total length of the temple is 60 feet, and the greatest breadth 50 feet, the inside being full of Hindu idols, mostly of stone, some of them crumbling with age. On one of the slabs in the walls there are traces of characters cut into the stone, which cannot now be deciphered, but which need not be regarded as the remains of any important original record For the builders of this temple were evidently men of discriminating taste, and neither the position of the inscription nor its form is such as they would have chosen for a memorial intended to be enduring. Some of the characters are only discernible by the aid of lamps, and the place is so dark and mysterious that the effect is dismal

There are ruins of several other wonderful temples scattered over the Kohat division, which once must have been full of intelligent life and industry



Transport Facilities a good 'road'

CHAPTER VIII

THE KORAT PLATEAU TO NAWNG KAI

Our first march from Korat was to Lachiang, 1 miles distant, where we camped The carts, placed lengthwise, formed a square about the encampment; immediately inside the carts the elephant-coups (howdahs) were placed, while the elephants and bullocks were fastened outside, with a sufficient amount of fodder for the night

The next march was to Pimai, and, that we might have a day at our disposal for the examination of the interesting ruins reported to be in the neighbourhood, we marched double distance The country was very flat with sparse jungle a great portion being under cultivation. In our route were two substantial wooden bridges

In the evening we crossed the Pimun, a river of considerable volume. and entered Muang Pimai the ruined walls of which were scarcely discernible The town had a cozy appearance in the deep shade of fruit trees and palms

Next morning we visited the remains of Wat Pra Prang an ancient temple which, though dilapidated, had a half familiar look the portico and the walls, with their pointed niches for holding lights recalling the appearance of a Hindu temple The outside enclosure is about 200 yards square, formed of gigantic smooth blocks like those at Korat This is however, on a grander scale in every particular Besides the circular holes a couple of inches deep, I noticed that these had a deep incision in the form of a T, the foot of the T being at the edge of the block It is difficult to arrive at a conclusion regarding the use to which the holes and T incisions were put They may have been required for some lifting apparatus, or they may have been formed by the catches of the cases in which, as some think, the blocks were moulded. The temple proper stands in the centre of the enclosure, and is in the form of a square, with a tall, isolated tower at each corner I entered one of these towers,

and found that the floor had been dug over probably in a search for treasure. The idols of stone were overturned and mutilated. The large sitting figure of Brahma had been overthrown, and the head with the hair drawn back and tied in a knot, had been knocked off. The figure was itself perfectly smooth, but on the base there were chisel marks, which looked as fresh as if executed the day before. There were other statues, the most remarkable being that of a woman in a kneeling posture.

Turning our attention to the temple itself, we measured some of the stones at the doorways, 9 feet high and nearly 4 feet broad. They bore ornamental tracings down to the floor, with little figures beautifully carved. The tracery over the doorways was exactly similar to that found on the ruins of Borobodar, near Jockarta in Java. The effect of the whole was very solemn, and the visitor, gazing at a structure as to the origin and purpose of which he had no clue, could only lament his ignorance.

The governor afterwards told me that there was a block of stone with the impression of a man's foot and a dog's foot. I had to leave at 3 a.m., but I regret not having gone back late as it was, to verify this interesting statement. The governor was an old warrior who had fought against the rebel Cambodians in 1840.

Although it was late in the season, the 25th February, a night's rain had made the morning delightfully cool and exhilarating, and this may, to some extent, have accounted for the beautiful appearance of the country. As the dawn advanced, wide grass plains, interspersed with clumps of trees, lay before our view, the horizon sometimes fringed with a heavy jungle, and the tall waving cocoanut and areca palms indicated the positions of quiet villages. As we proceeded on our march the jungle dissolved, and further plains, with what looked like groves of fruit trees, spread out before us. The country had all the appearance of affording good sport, the swamps being covered with numerous varieties of aquatic birds. Buffaloes were seen that were said to be wild; and during the afternoon it was reported that some of these animals were near the camp. We went out, and having stalked them very carefully, experienced the excitement of standing for their supposed charge. Leonowens dropped one within 30 yards of him, and the men, thus supplied with fresh meat, were delighted. The animals had been described as "wild," now, however, it was mildly represented to us that they might be "considered

wild,' as they had no real owners, and were in general left to roam wherever they pleased, being worked only when there was an unusually heavy harvest. We thus found ourselves in the somewhat ridiculous position of having stalked tame buffaloes, and had not even the satisfaction of knowing to whom amends should be made

The next day's journey lay through precisely similar beautiful country, but the watermarks on the trees 4 feet up the trunks, showed that it must resemble a perfect sea during the floods

Near our camp at Taluang we met with the usual scrub and jungle Salt is collected in large quantities in the district

From Pu Thai Song the route was at first very uninteresting, passing through forest of miserably small trees A couple of marches further on the country became much more interesting, the forest trees were larger and the road undulating, which, however, was very rough for the poor cart bullocks Both forests and undulating country suddenly stopped, and we found ourselves in wide salt wastes. On some of these places there was not a tree growing, and the heat was terrific.

The country we traversed was very sparsely populated, and yet there were evidences of extensive cultivation. Salt is procured there in large quantities, it appears in the form of an efflorescence on the surface of the ground, and on a cool morning has all the appearance of a hoar frost. The surface earth is scraped up and thrown into a rough trough, usually the trunk of a tree scooped out, which has a pipe at the bottom Water is mixed with the earth and drawn off into a vessel This process is repeated until no salt can be tasted in the water. The salt in the other vessels is separated by evaporation.

Nearing Kunwapi the country was particularly flat, with not a tree for miles What was not under cultivation seemed to afford excellent pasturage for the numerous herds of cattle that were scattered over the plains Beyond Kunwapi the road passed through excellent forests, where there were numerous tracks of wild elephants We emerged from the forest into populous country, and, passing over extensive rice fields, reached Nawng Kai

CHAPTER IX

NAWNG KAI AND WIENG CHAN

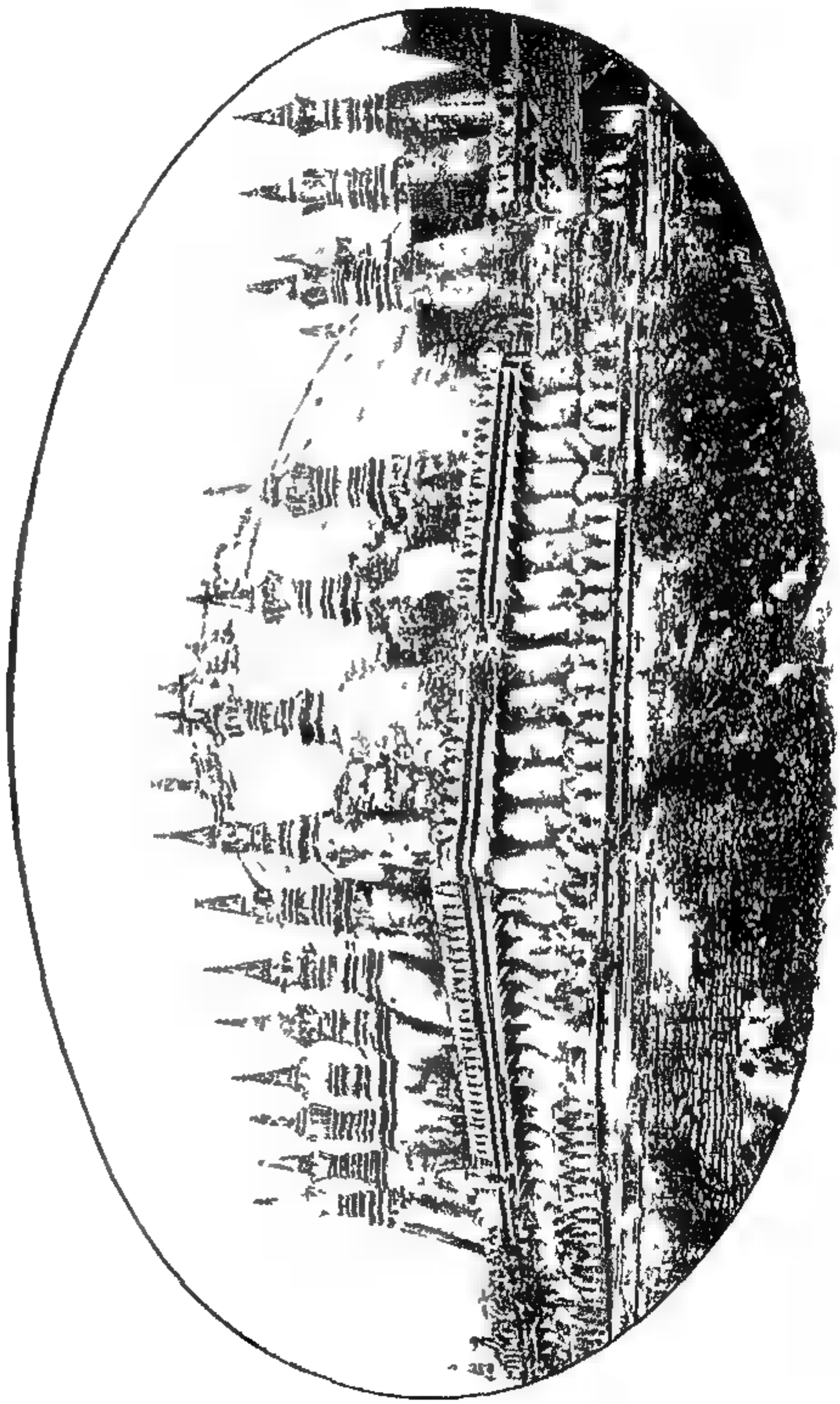
THE men had marched from Korat at an average rate of 17 miles a day, the total measured distance being 283 miles The general health was particularly good, there being no serious complaints, but most of the men had never fired a gun, and altogether they formed a very miscellaneous company

Nawng Kai is the capital of a large district, having superseded the former capital, Wieng Chan, some miles up the river It appears in its way, comfortable, rice, salt, and fish are plentiful

In the town there are a number of Chinese shops exposing for sale Manchester calicoes, bearing the trade-marks of well known Singapore firms, and hardware of German manufacture In the district raw silk, ivory, hides, horns, and salt are collected This trade likewise is in the hands of the Chinese, and the produce from the northern and less accessible provinces also passes through their hands. The ubiquitous Siam pedlar is at Nawng Kai also, asserting his claims to a share in the profits of trade.

The town is on the right bank of the Me Nam Kwang, which here is magnificent From bank to bank the river bed measures 1000 yards, and when the river was at its lowest I found a discharge of 48,000 cubic feet a second. Great preparations were made to receive P'ia Raj. An archway was erected a few miles out, and priests were there with holy water, which they sprinkled on P'ia Raj while invoking blessings on him. To add *éclat* to the proceedings, Leonowens had his men drawn up to receive him In the afternoon foot-soldiers, leading the procession, came in, then some minor officials on elephants, then the sacred image of Buddha, immediately followed by P'ia Raj. When he alighted from his elephant, a flourish of bugles made known the fact

The governor was about sixty years of age, and blind He had



FORTIFIED PAGODA NEAR WIENG CHAN, BUILT BY THE HAW

been made governor in recognition of the loyalty of his family to Bangkok during the Wieng Chan rebellion, at which time his father,

after having been pinioned and even kneeling before the executioner had nevertheless escaped

Bush accompanied me to Wieng Chan, which, once a powerful city, had now the appearance of an ordinary village

Near Wieng Chan is a very interesting pagoda, called Wat Luang where religion and war are combined the lower part being a perfect

OLD INSCRIPTION AT WIENG CHAN

fortress riddled with loopholes. The Haw had taken possession of it without opposition, and by means of ropes, in the search for treasure, had pulled off the spire, built of blocks of laterite rudely squared They had then marched on the defenceless people of Wieng Chan, and had enriched themselves at the miserable natives'

expense At that time there was a Siamese commissioner Phra Maha Amat, at Ubon Hearing of the doings of the Haw, he, on his own responsibility, came up, got the people together, fought the Haw who were about 800 strong, and totally defeated them. The last of the party took refuge in a wat, and speedily barricaded it,

WAT (TEMPLE) FORTIFIED BY THE HAW

and made a few loopholes in the walls, but they were captured and executed This band, in their lust for loot, had gone beyond their depth, and were completely cut off from their communications. The commissioner beheaded the unfortunate chief official of Wiang Chan for surrendering Siam now awoke to the gravity of the occasion,

and equipped an army to drive out the Haw neck and crop These robbers had entrenched themselves at Tung Cheng Kam, but they were quickly dislodged, and nearly all slain by Phra Rajanarakun

Wieng Chan was at one time subject to Luang Prabang, the authority of that province having extended over nearly the whole of the Me Nam Kawng valley After Wieng Chan had rebelled and established its own independence, the unity and strength of the white bellied Lao was destroyed for ever The Lao of the Me Nam Kawng are called white-bellied to distinguish them from their black bellied brethren inhabiting the northern parts of the Me Nam Chao

LAO OF HUA PAN A PANTHOR

Pha, who tattoo their bellies and thighs, while those of the Me Nam Kawng do not practise tattooing.

The story has it that when Chao Anu was Governor of Wieng Chan, about 1823, his son was called down to Bangkok in charge of the men summoned to assist in digging the canal that was to connect Tachin with Bangkok It would appear that the official in charge of the undertaking after kicking the young man, added a flogging, and when the youth returned home, his father, indignant at the insult, rebelled The army sent from Bangkok totally destroyed Wieng Chan, but Chao Anu escaped to Anam Following the advice of the King of Anam, he withdrew to Chieng Kwang, but

the governor of that town made known his place of refuge to the Bangkok general, who again marched against him, seized his person, and sent him a prisoner to Bangkok where he was exposed over the river in an iron cage till he died. Some say one of his followers succeeded in conveying to him poison, which he gladly swallowed. At this time Chao Noi was the Governor of Muang Puan. The King of Anam, hearing of the end of Chao Anu, sent up an army and seized Chao Noi, who was taken to Annam and speared to death, his five sons being held in captivity. The King of Anam then set up Chao San, a cousin of Chao Noi, to be Governor of Chieng Kwang, together with 3000 men to support his authority. At the instigation of Chao San, the Siamese general at Nawng Kai marched with a force against Muang Puan and at midnight attacked the Annamites, slaughtering them almost to a man. Chao San then went to Bangkok, and Puan was left pretty much to its own devices.

When Tuduk ascended the throne of Annam he liberated the sons of Chao Noi—Chao Po, Chao Top, Chao Poma, Chao Ung, and Chao Kam. When Chao Po returned, instructions were sent from Bangkok to Luang Prabang to invest him with the powers of governor.

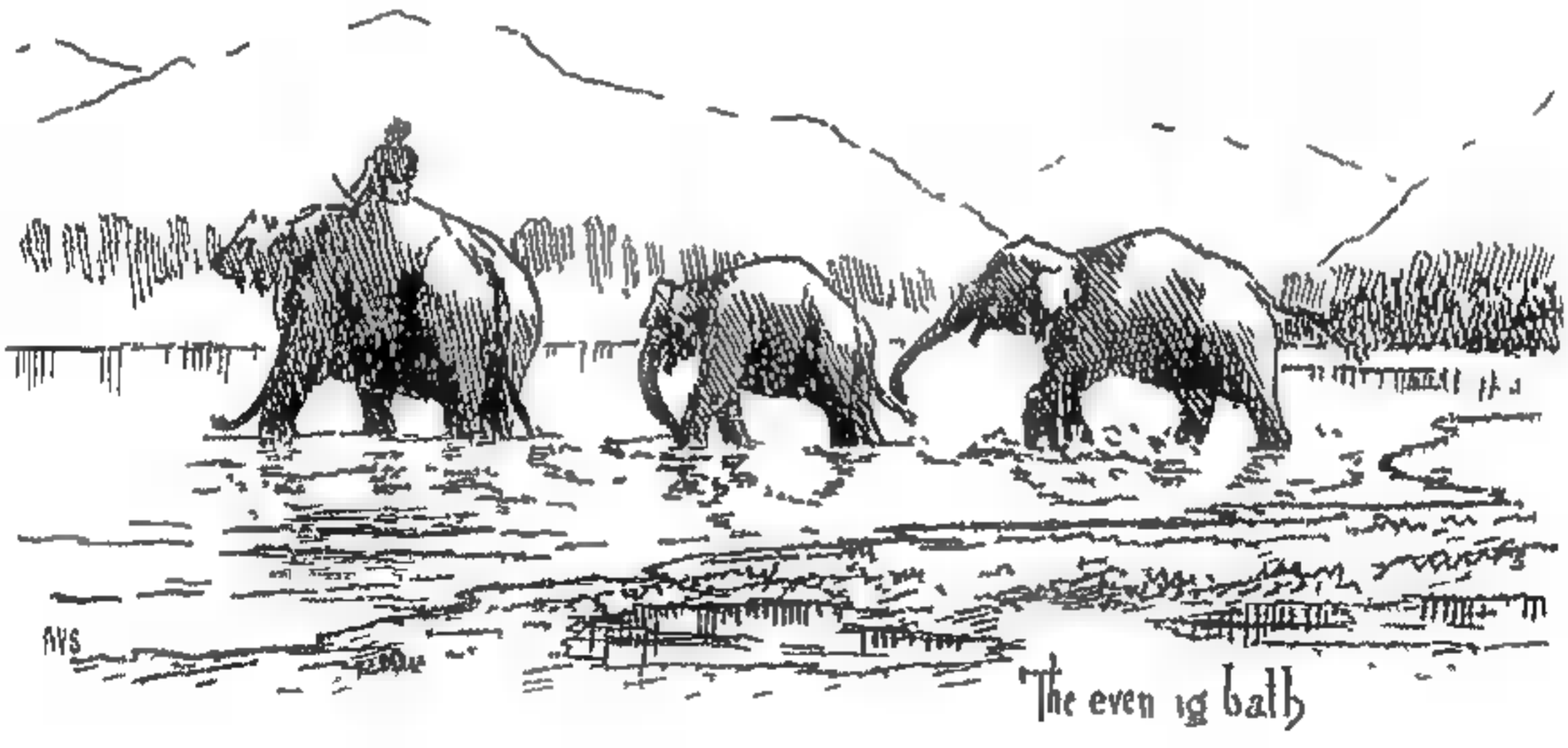
Chao Po was succeeded by his brother Chao Ung, during whose governorship bands of Haw poured into Puan. He was killed by them, but his death was amply avenged in 1873 by the Siamese generals Phra Maha Amat at Wieng Chan, and Phra Raj at Tung Chieng Kam, where they had made their principal stockade. Phra Pinom Sarasin, a nephew of Chao Noi, was appointed by Phra Maha Amat temporary governor, and after Chao Kanti, the son of the unfortunate Chao Ung, was made governor.

Chieng Kwang was to be the chief object of our exploration. We were told it was utterly uninhabited, and that arrangements for securing supplies were next to impossible. Our preparations had to be elaborate for travelling through a country which it would take us twenty-five marches to cross, without the chance of meeting any one except, perhaps, a band of Haw marauders who would be certain to interfere with us.

It was interesting to observe the behaviour of the elephants when they were being sent across the river. Some swam over quietly enough; some, after making an emphatic protest, gave way, but there were others that could not be impelled, even by goading with

spars or by the application of fire they rushed back, and nothing could force them over For these the men had recourse to another process Having lashed together three ordinary dug-outs, they laid spars across them, about 4 feet long, and 3 inches in breadth and thickness, and on these placed a flooring of 1 inch planks, covering the whole with plantain stalks and other fodder I was doubtfully considering whether this extemporized raft was strong enough to bear even one elephant when, to my surprise, three walked on board and were safely carried to the other side In this manner the transference of the animals was completed and we prepared to start.

Bush went by boat to Luang Prabang and Leonowens accompanied me. We crossed the river and pitched our tents for that day. The old blind governor gave us all the assistance he could, and said we were certain of luck, as the day was cloudy, and the wind that was blowing to the north was carried by angels clearing the way



The evening bath

CHAPTER X

AMONG THE MLO

THE first five marches lay over a very flat region in no way interesting, but we passed several villages which belied the total desolation we were led to expect The country did not strike one as being particularly prosperous or fertile; swamps occurred with their usual frequency.

One morning I saw a striped hyena standing under a tree The camp pariah dog gave chase, but I called him back On nearing the jungle the wily hyena stopped and turned round, seeming very much disappointed and looking longingly after the dog. As usual, my gun was nowhere As we went on, tales of the Haw were brought in, agonizing accounts of their raiding on villages, whose inhabitants they had slaughtered, mutilated, or carried into captivity.

Near Somdi the country became rough and hilly Somdi itself was an interesting camping ground. A village stands on the right bank of the Nam Lak, a considerable river, the water of which is very clear. The camp was pitched within an old stockade, the palisade of which was still standing

A single incident will illustrate the extraordinary dread with which the Lao regarded their enemies, the Haw. At night, when the whole camp was fast asleep, one man shouting in nightmare struck such terror into his companions that they raised the cry of "Haw Haw!" and bolted in fearful confusion

Beyond Somdi, travelling through heavy jungle which protected us from the searching sun, we came upon a village beautifully situated at the foot of a lofty mountain. The people were interesting settlers from Hua Pan Tang Ha Tang Hok The Haw having plundered their former homes, they had sought refuge here

A great number were suffering from *goitre*, which may have been due to the limestone which is plentiful in the neighbourhood The

peaks of this rock assume all manner of grotesque shapes, some looking as though they were the remains of old fortifications. The inhabitants cultivate rice, cotton, and indigo for local use They also extracted a blue dye from a creeping plant called *buck me*, and a black dye from the bark of a tree they call *nung teng* The leaves of the indigo plant are collected and soaked in water for three days, they are then squeezed, and the liquid mixed with lime, which is allowed to settle for a day, the water is strained off, and the residue forms the dye. The leaves of the *buck me* are treated in the same manner as those of the indigo plant. For dyeing black the bark of the *nung teng* is beaten fresh into a pulp and mixed with water, in this mixture the cloth which is to be dyed is soaked, and then dried in the sun, the operation being repeated on four or five consecutive days, after which the cloth is washed in a stream and is ready for use.

One of the headmen, dressed in a long red shirt, told me he had the devil in him, and that he would remain in him for another three or four days The only way he could satisfy him was by long drinks of home brewed spirit. The condition of the man showed that the devil had been indulging in long drinks, and I remarked to the possessed man that the devil should be satisfied He told me that it was appointed for him to remain four days longer, and there was no help for it but to give him drinks

We were told that Cao Ann, when fleeing from Wieng Chan to Anam, having taken this route with elephants, had been obliged to abandon the elephants on account of a difficult pass I went ahead to see about a road Elephants could certainly not ascend the path The hill was well clothed with forest, but every now and again great limestone cliffs projected above the surface, and brought one to a standstill However, by evening an elephant track had been found with difficulty

There was no fear of the noble elephant refusing to do his duty, it was the drivers who were up to all manner of tricks, and if we could we would gladly have dispensed with them When the animals advanced the drivers hesitated, but a judicious mixture of language persuaded them to pluck up a little courage, and in a very short time all the elephants passed the supposed danger, slowly surmounting the hill 4400 feet above sea-level.

We encamped below the top of the pass near a village of Meo

(Chinese, 'Miao tzee'). This people, beardless and very Chinese in their physiognomy, though in their general appearance reminding one of the Afghans, we found interesting. They dress in black, the men wearing loose trousers, a long loose coat and a neatly folded turban, while the women have the feet and legs bare to the knee, to which a petticoat reaches with graceful folds which, in walking, they have an art of displaying to the best advantage. The female toilet is completed by a jacket with a sailor's cape, a neat turban, and designs in embroidery sometimes of silk, adjusted here and there. The principal ornament is a circlet of silver with a small oblong pendant attached, having on one side a Chinese device, and on the other Chinese characters which they regard as a charm against evil spirits. The Meo have no written characters of their own. The headman wore a Chinese pigtail, the others had the top of the head shaved, and allowed their hair to hang loosely over the shoulders.

They seem a hardy race, consisting of ten or twelve different tribes, but I could not get the same number from any two men. Their chief occupation is the cultivation of opium. They are happy in the selection of mountain tops for their abode, where they always enjoy a cool climate, and they have a prejudice against remaining on level ground, even at tolerable elevations. The Lao say of them that they cannot live where the sound of the frog is heard. When they are satisfied that they have exhausted the soil in one neighbourhood, a general survey of the surrounding country is taken from an eminence, and if a limestone locality is observed, some of the community are sent to explore and report.

In these limestone regions the frequent jagged ridges are no indication of infertility. The soil at their base is very rich, and a Meo told me that he has been able to grow Indian corn for seven years in succession on the same plot of ground.

Having decided on the new site for a village a few families make a start, collecting their dogs, goats, poultry, and occasionally a few bullocks used for transport. The men carry the things required for daily use, the women have their babies slung over their backs, while even the children are loaded. They form apparently, a merry party, and when they arrive at the chosen site, which is always near a spring, they at once proceed to form a clearing. The trees cut down are roughly hewn into planks, and serve as timber for the sides of the new dwelling while shingle is used for the roof. After a

settlement has been effected, household arrangements still maintain their simplicity. Ventilation presents no difficulty, and the smoke from the domestic hearth finds an easy exit between the planks Water is sometimes brought down in bamboo pipes, and the wooden tub which receives it has a close fitting cover to keep out the dust

In the villages women may be seen busily employed in the tasks which, in the division of Meo labour, have fallen to their lot Some grind corn in neatly formed hand mills, some prepare indigo for dyeing, while others weave cloth, or execute elegant designs in cotton or silk embroidery The villages are cheerful and really always picturesque from their position and surroundings On one side are fields of Indian corn or vegetables, on another are hemp fields or plantations of tobacco, and there is always a wide stretch of land devoted to the cultivation of the poppy In the month of February the poppy fields are in full bloom, and the large blossoms, tinged with every shade from pure white to deep purple, present a magnificent appearance. Here, also women are employed, and may be seen moving from plant to plant with china cups, collecting the opium that has been thickly oozing from five or six incisions in the pod

The Meo are careful of their cattle and ponies, often placing them on platforms above the ground, and they are provided with sheep-dogs of an excellent breed, some of them tailless

Like all who cultivate the hillsides, these villagers spend several months every year in felling trees on the slopes. The area cleared is thus constantly extended, a new plot being always under preparation. But when the felling of timber in one place begins to exceed reasonable limits, then it is time to search for 'fresh woods and pastures new'

The Meo bury their dead near the village, building a tomb of stones and earth With the corpse is placed a cock, a white one being preferred, a bowl of rice, and some liquor to cheer the spirit on its way

CHAPTER XI

IN THE TRACK OF THE HAW

We were now in a country under the direct influence of the Haw

Ten years before Pra Ray had destroyed the stronghold of these robbers, but on his withdrawing from the district they had returned, and had ever since been extending their sway over Puan

Who and what were these Haw that brought so much misery on large tracts of country, and established such a name for cruelty as to terrorize a whole population? They were in a word, Chinese brigands At one time Chinese traders known in Luang Prabang as Haw came down from the north in great numbers to traffic with the inhabitants, and when the peaceful traders gave place to brigands of the same nationality, the name of Haw was naturally transferred to these Since the appearance of these marauders, communication and trade had ceased, and the whole district had been thrown into confusion Their robberies were on such a scale as to suggest that they formed the advance body in some great movement, and the information I was able to gather showed that Chao Fa Wong, the Governor of Yunan, was, in fact, the head and centre of their scandalous proceedings When the French were at war in Tonkin he sent orders to the band of ruffians wandering over the Luang Prabang district, commanding them at their peril to attack the French

It was about the year 1870 that the depredations began, the plunderers rapidly overspreading the country near the Tonkin borderland They overflowed into the outlying provinces of Luang Prabang, Sibsawng Chu Tai and Hua Pan Tang Ha Tang Hok (the five divisions to which a sixth was added), and also into Chieng Kwang or Muang Puan. Up to that time the provinces had been truly peaceful, and the taxes regularly collected, those due to Luang Prabang having been collected by an official who was living in 1893. After the depredations began the whole scene was changed, and the

murderous and pillaging bands advanced without interruption as far as Wieng Chan on the Nam Kawng where, as already mentioned, they received a wholesome check, but not before they had effected an immense amount of mischief

Their route could be traced by the ashes of villages, and by evidence they had left within temples and pagodas where they had dug up

CHAO KANTI, GOVERNOR OF MUANG TUAN

the ground in search of buried treasure In this search, so skilful had practice made them that, in many of the temples, only the few places where treasure was likely to be hidden were found to have been dug, the rest being left strictly untouched

We were shown a proclamation brought down by some people who had escaped from a village plundered by the Haw Written in Lao, and having a square Chinese seal, it called upon the inhabitants to come out and acknowledge the Haw authority, threatening death without escape in case of disobedience, for whoever fled to Luang Prabang would be pursued and seized

These poor people living in the forests and cultivating the mountain slopes, had a wretched existence for, while thus harried mutilated, and slaughtered by robbers, they at the same time complained of the oppression and extortion practised by their own governor, Chao Kanti

The Haw were in movement 180 strong, only two days' march from us, and it seemed that we were likely to encounter them Our soldiers were therefore brought out to practise with their rifles, but most of them were scared by the report of their own guns, very few could hit a large target 80 yards distant, and of the snider cartridges about sixty per cent missed fire Everything considered, it would be dangerous to meet the Haw with such raw and unsatisfactory material If our men should be unable to keep their ground there would be nothing to restrain the Haw, for it would seem as if they had defeated Royal troops, and it would be hard to say where the mischief would end We therefore decided to take only thirty men with us, sending the rest of the camp to Luang Prabang so that, should the worst happen, the Haw would not have very much to boast of

As we were starting some of the people came down from their hiding places in the mountains, and we engaged them at half a tical a day to help in cutting a path through the jungles, and to act as our guides

Along the paths there were a great number of sharpened bamboos, which to men with boots were nothing, but caused fearful wounds in the naked feet of some of the men Our march, however, before long became possessed of more agreeable interest, for the road, once a regular made road, was nearly level, and lay among gently sloping hills covered with long leaved pines, through which the wind whistled pleasantly, while the ground was covered with bright flowers We came in sight of the abandoned fields of a village where the beauty of the scene was such that involuntarily we stood still to gaze I wonder how much our experience of the uninteresting jungle, where we had been plodding completely in the dark, had to do with our feelings?

The forsaken fields, here over 4000 feet above the sea, white with waving grass, seemed as though still cared for, and the hills without wood, except here and there a clump of trees, were clothed with a soft verdure, which in the light of the setting sun looked like purple and gold

On the banks of a clear but sluggish stream we found a convenient spot on which to pitch our tents.

Some precautions having been taken against lurking Haw, we turned to examine an adjacent wat. The building was interesting from the outside, the architecture, while similar to that seen throughout Siam, being more delicate and refined. The doors were richly enamelled, but the interior had been thoroughly plundered. A large copper figure of Buddha lay on its side, the pedestal on which it had stood having been searched for treasure. In the *débris* there were numerous images much sought after by the men. Most temples had the ordinary sitting figure of Gautama, some of brick and mortar heavily gilded, others of copper, while others again were of a composition of gold and copper. All metal statues known as Gautama *pett* are ancient, and are so called (*pett*) from the position of the feet. This is the chief distinction, but there are other marks showing one figure to be more sacred than another.

Many pretty pagodas reared their graceful forms invitingly, but we could not venture far from the camp when every bush might conceal a Haw. The wats had been wantonly destroyed, and piles of palm-leaf records lay heaped together, which, unless soon looked at, would be lost for ever.

The country was still improving, with medlar trees in blossoms, cedars and pines shooting forth new leaves, and the slopes stretching to the north-west and south clothed with fresh green grass springing up among the ashes of last year's growth. Suddenly we came on a charming little lake, Nawng Tang, at an elevation of 4000 feet above sea level. It was over a mile long, and half a mile broad, and never dry. On the east side stood a lime cliff about 100 feet high.

The deep blue sky reflected in the bosom of the lake, and the intense stillness, only relieved by the motions of the water fowl, deepened the pleasurable sensations which the beauty of the surrounding landscape excited.

The origin of the lake, according to local tradition, was on this wise: Where it now stands, a village formerly stood. A huntsman of that village shot a white faced deer, and on that very night, amidst storm and earthquake, the village and its inhabitants were swallowed up by the waters, which thereafter formed a lake.

Notwithstanding the beauty of the country, there was no sign of

human life as far as the eye could reach We met with some peafowl, rarely found at so high an elevation and as tigers keep company with pea-fowl, we were not long in finding traces of them. Partridges were plentiful as also were deer We passed over the sites of many battle-fields, and at Kung Koi we remarked the traces of an old stockade

We crossed the Nam Tang a small stream running in a channel whose banks were over 100 feet deep, and about 800 yards apart The valley was well suited for rice cultivation. On ascending the bank of the stream we met with other surprises A vast plain, called Kung Ma Len ("Ponies Play ground"), about 6 miles broad and 10 long, and about 3500 feet above sea-level, stretched as flat as a table before our view It was covered with fine grass, and had afforded excellent pasturage for cattle, which in better days had fed there in great numbers We rested under the shade of a pine tree, and easily distinguished the snake like course of the pathway as it ascended the gentle slope of a hill

On the right rose a particularly beautiful pagoda, whose glittering whiteness was intensified by contrast with the blue sky It looked like some spirit brooding over the stillness of the lovely solitude. In the distance we beheld objects which, to our surprise, looked like tents, on nearer view the tents seemed to give place to cattle, our wish being doubtless father to the thought, the cattle, when subjected to the telescope, were transformed into rocks, apparently cropping up from the surface of the ground, and these, as we approached them, proved, to our astonishment, to be gigantic stone jars Some of them stood erect, some were lying on their sides, some were in fragments, and all round there was evidence that the ground had been excavated. Beneath one of them we dug up the earth and found traces of charcoal, with what appeared to be an anklet of rusty iron The tallest of was leaning, its sides were straight, and measured, one 7 feet 6 inches, and the other 6 feet 4 inches above the ground; it was 19 feet 5 inches in girth about the middle, and was 1 foot thick. Another, better shaped and provided with a neck, was very much tilted over, it was nearly 6 feet high, its girth at the widest was 25 feet, and the diameter of the mouth 4 feet 6 inches. Embedded in the substance of some of the jars were nodules of quartz Beside them lay several flat stones, one of which was 7 feet long, and 6 inches thick at the edge, but much thicker at the centre, while a smaller one, on being

turned over, showed three prominences 2 or 3 inches long, rising about an inch above the surface

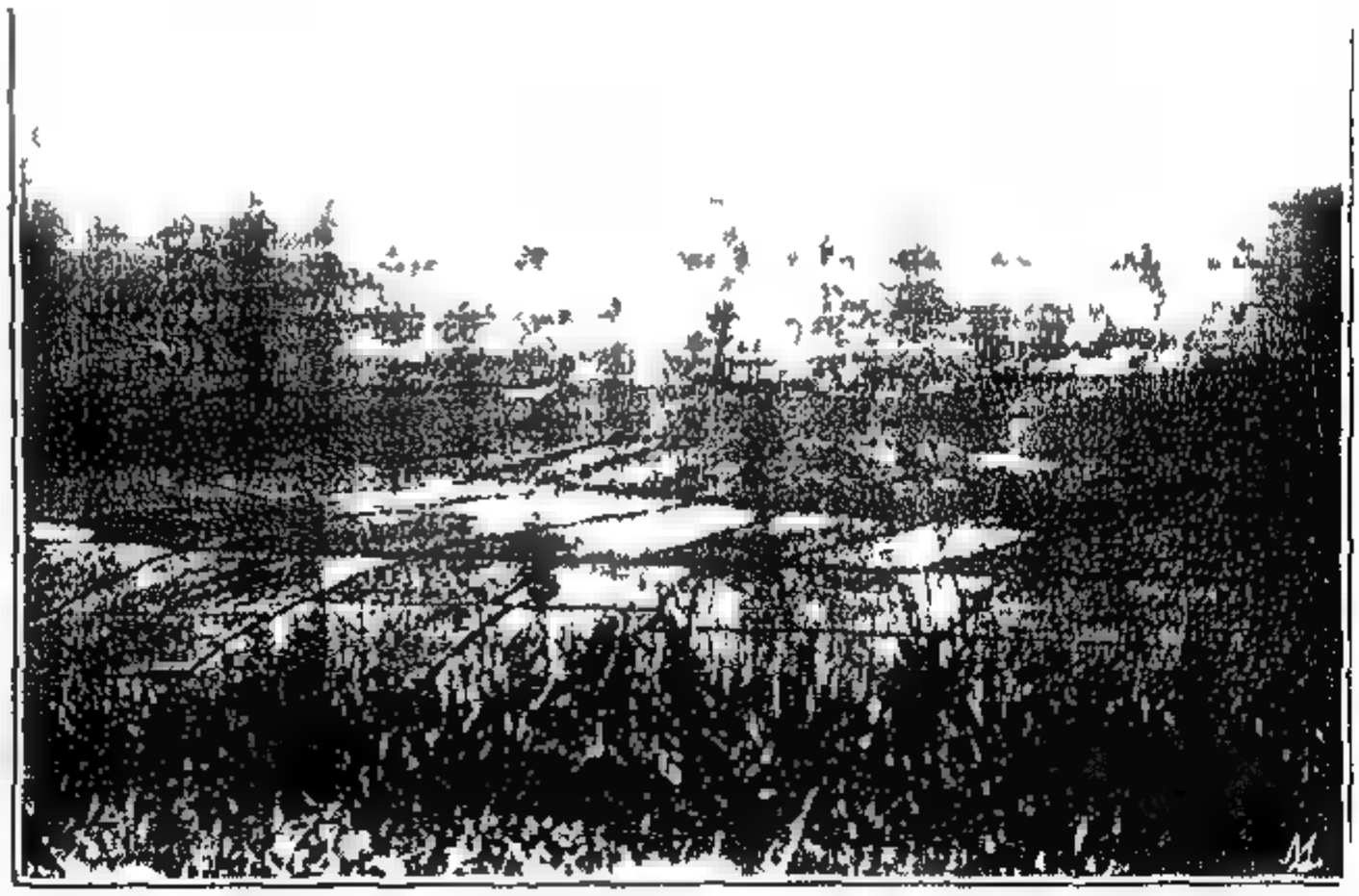
These vessels are such as could not possibly have been carried to their present position, but must have been made *in situ* The local belief concerning them is that they were formed by angels to serve as drinking-vessels

CHAPTER XII.

THE CHIENG KWANG HIGHLANDS

RESUMING our march, we passed along narrow valleys which had at one time yielded plentiful crops of rice, then crossing a jungle ridge, we descended into the valley of Chieng Kwang, the capital of this beautiful country.

This valley, about half a mile broad, is over 3000 feet above sea level, and on each side the mountains rapidly rise to the height of



PLAIN OF CHIENG KWANG

another 3000 feet, those to the south being well wooded. The whole valley is well adapted for the cultivation of rice, of which as many as three crops can be raised annually, the irrigation of the fields requiring scarcely any labour.

We were met by the headmen of Chieng Kwang, who were well clad, and welcomed us with presents of rice. They guided us through rice fields, which were being flooded in preparation for the sowing, and our progress was more like plodding through tanks than walking along a road.

Where was the great city, defended, according to report, by 4000 fighting men? Rounding a spur of hill we got an unimpeded view of upwards of two miles, at the end of which was a low hill covered with jungle and surmounted with a pagoda. This, we were told, was the city of Chieng Kwang.

This city was now under the sway of the Haw, and the inhabitants found their new masters very exacting. The robber stronghold of Tung Chieng Kam, three days distant, had recently suffered from an accidental fire, and the people of Chieng Kwang had been compelled to provide a company to assist in the repairs. Chieng Kwang stands at an elevation 3770 feet above mean sea-level, on the hill called Pu Kio. At its best, within the memory of the oldest inhabitant, it was but a collection of wooden houses. Across the Nam Nia, along a spur overlooking the plain, were still the remains, almost perfect, of extensive earthworks, constructed at the time when Chao Anu was captured and taken to Bangkok.

It is the custom of the Siamese, when building wats and pagodas, to make offerings of jewellery and money, which are placed usually under the sitting figure of Buddha, or in its breast, or are buried in the floors of the wat, exactly in the line of sight of the figure.

These places, when the Haw ransacked the city, the inhabitants were compelled to dig up, while their plunderers stood by, sword in hand, directing the proceedings.

The pagoda on the hill, the finest in the region, had not escaped. From a distance it looked perfect, but on a nearer approach rents were found on three sides, almost from the pinnacle to the foundation. It was wonderful that the spire, 30 feet high, had not fallen in. The Haw are said to have obtained as much as 7000 rupees' weight in gold from this pagoda. Fragments of urns which had contained offerings, lay strewn about, and still showed elegance of form.

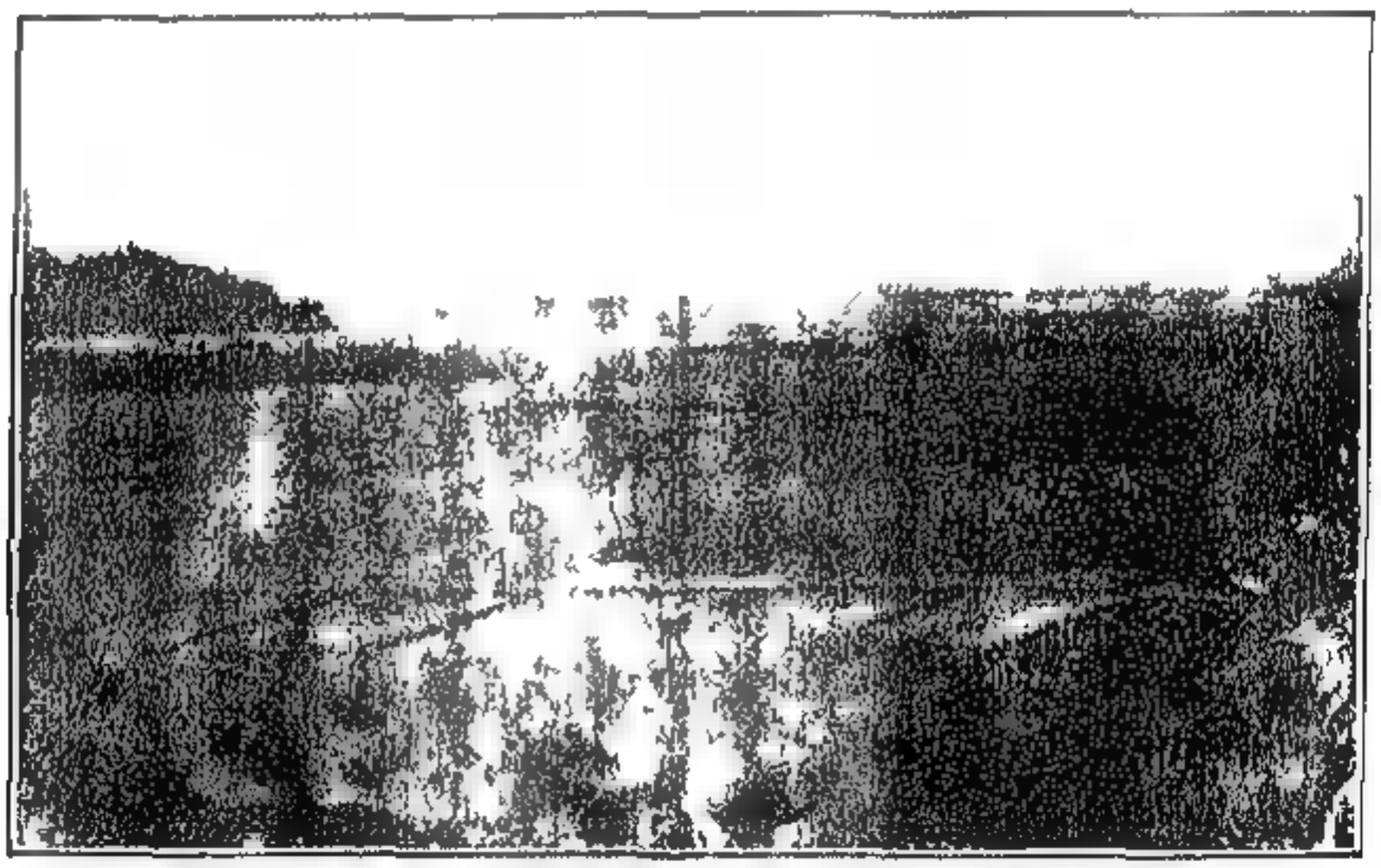
The Muang Puan population exhibited refinement in all they did, but their elegant taste was of no avail against the rude barbarian. The original inhabitants were Kaamu, in whose time the country was called Muang Ka Patum. It would appear that the region was once

ravaged by the Burmese under a king whose name was Pra Chao Raja ('the rat'), who ruled at Hongsawadi (Pegu).

Little is known of the history of Chieng Kwang. Its early inhabitants, if not powerful, must at least have been industrious. Now the population belongs to the ordinary Lao stock of Luang Prabang, with precisely the same written and oral language.

The Siamese and Lao are of one race, with a common language and the same type of countenance. It would be impossible, in a mixed crowd, to say which were Lao and which Siamese.

Leaving Chieng Kwang, we crossed broad paddy lands, which being boggy, caused considerable trouble to the elephants. The



MUANG TUAN

heavy creatures kept sinking and struggling, until the clever Siamese provided them with a firmer footing. This they did by slitting and weaving together some bamboos into a mat, which they stretched over the bog and pegged down. Over this fragile bridge the animals passed in comfort, apparently grateful for the relief which had been afforded them.

Struggling over a hill and through nasty jungle, we crossed a spur and saw stretched before us Muang Tang.

The features of the region were similar to those with which we were already familiar; the fields were abandoned, and there was not a trace of human habitation. Again and again we swept the country with our glasses, but to no purpose.

Pitching our tents near an old burnt stockade, we strolled over the remains of a village, apparently recently prosperous, and saw several plundered wats and pagodas

Leaving Muang Fang, we passed other villages in ashes, and stockades, where the people had made a feeble stand against the Haw, who, it would appear, had committed these depredations only a few months previously The stockades looked as though they were at least some two or three years old

We ascended a heavily wooded hill about 6000 feet high, near the top of which was an old obstruction across the path. From the top of the hill, Muang Ngan could be seen lying at the foot, for on the southern slope there was not a single tree The town is at an elevation of over 4800 feet, and the climate is delightful. The place looked rather cheerful, as we could see houses in twos and threes nestling together, and rice was being planted As we approached we saw the women running with their children, and the buffaloes were driven away, and it was plain that the people took us for Haw; but, sending on men ahead, we succeeded in reassuring them, and they returned

The headman, named Ou Muang Ngan, put in an appearance and he gave us the story of the troubles from the beginning

Two French priests had been living at Muang Ngan for upwards of ten months, their names, as far as I could make out, being Father John and Father Antonio Dr Neiss, a French traveller, who had come about six months before our arrival, was the next European visitor, Chao Kanti being there at the time Dr Neiss had scarcely reached Muang Ngan when he despatched a letter to the Haw of Tung Chieng Kam, from whom a reply was received in due course Dr Neiss then told the people that the Haw were coming down on them, but that, if they agreed that the country should belong to France, he would remain and help them On their replying that they had no power to hand over the country, he rejoined that he would hold them responsible if the Haw stole his baggage and stores. To this they would not agree, but offered to take his property with them into the jungle, and when the Haw withdrew restore it to him. He thereupon deposited his baggage in a house, outside the door of which he affixed a written placard, stating in Anamite that the country belonged to the King of Anam, and that if the Haw damaged his property he would appeal to the king for justice When

the Haw came down, Dr Neiss went to Nawng Kai and the two priests to Anam The unfortunate people were shut up in their stockade their houses burnt, and cattle slaughtered For three days they held out; then their ammunition was spent, want of water forced them to terms and they had to pay heavy fines The Haw then amused themselves by applying thumb screws to persons who had been the special objects of Dr Neiss's generosity, forcing them to surrender the guns he had given them, and finally turned their attention to the foreign settlement, burned the priests' houses, and scattered Dr Neiss's few clothes and books in the roads

UTHIA

CHAPTER XIII.

ON THE MEKAWNG RIVER

MARCHING from Muang Ngan, we left the beautiful plateau country and got into the jungle and rough footpaths Our tents, pitched near a patch of Indian corn, were visited by the women and children, who usually took refuge in these out-of the-way places from the Haw I was surprised to see the children wearing rupees as ornaments round their necks The rupee was, in fact, the current coin of the district, having been introduced by the enterprising Taungsus of Burma, who were everywhere to be met with, carrying their packs of small goods It gave something of a shock to be told that they trafficked also in slaves, exchanging opium for men and women, the unfortunate captives of the Haw

We pushed on to Ta Tom, which the Haw, after settling with Ngan, had hastened to plunder Only two huts were now standing, the rest having been burned, and a number of the miserable inhabitants had been carried off to Tung Cheng Kam The cocoanuts were abundant, and as there was none to claim them, our men helped themselves liberally. The place seemed to have been important, with a great deal of land under rice cultivation. From Ta Tom the Nam Chan was navigable, and we prepared to make the most of it

The elephants having had a rough time, we decided to send them back to Nawng Kai without loads. Having quickly constructed rafts of bamboo, we pushed off, and were borne past many cocoanut trees and several sites of villages, but we met no inhabitants. Our night's quarters were infested with insects in great variety, among which mosquitoes played a prominent part

The river was very narrow, and lined on both banks with thick

jungle. Our bamboo rafts had to bear a good deal of knocking about and some of the rapids gave us trouble, but at last, on May 11, we reached Ban Kam Ahkan, where we changed our craft for small dug-outs. Here there was a new settlement, ruled by Chao Kanti's cousin.

We now pushed merrily on to the Me Kawng, which was rising rapidly, and reached Nawng Kai on May 14.

There were a great number of boats, and the place looked as though a brisk trade was being carried on. Transport was effected mainly by means of rafts, many of them 60 feet long, which looked like floating bee-houses. They were arranged very comfortably for travelling, and could descend the river as far as Kemmat, below which point the rapids are too strong to allow anything to pass.

We started from Nawng Kai on May [illegible], the gongs and drums of the wats sounding very prettily. The notes fall regularly on the ear, first the gong, then three beats of the drum, then another gong an octave higher than the former. The drums are [illegible] feet long, and 2½ to 3 feet in diameter, the drum head being raw hide.

At Kaw Keng the river narrowed and ran between immense blocks of rock. At Ban Ang the scenery became very pleasing, with low undulating hills that looked as though they had once been under cultivation, down to the river-banks. Here the river narrowed to 60 yards, and as the men could no longer pole against the stream, we made slow progress, pushing along the side from rock to rock.

At Keng Mak more serious difficulties began. The river now became perfectly wild, with huge rocks in every direction, their surfaces glittering with a metallic lustre, now green, now black like coal. These colours must have been caused by some deposit from the water. At Nawng Cheng San there was a sort of lake cut off from the river by piles of silvery sand and huge rocks, and here, at the proper season, great numbers of fish were caught. The whirlpools were very violent, and often, when struggling against the downward current, we were caught in an eddy and hurried swiftly up stream past the opposing rocks.

On May 21 we reached Cheng Kan, with much trouble, one boat (fortunately recovered) having been swamped at Keng Chan. The nights were very stormy, and once I awoke as if from a nightmare,

to find the stern of a boat driven through my boat's covering and settling on my chest My friend, Leonowens, was on board the craft which was in danger of sinking mine, but, though I shouted, he continued his slumbers undisturbed. With very great difficulty I managed to push off the intruding boat, but in doing so got soaked to the skin. There was now no protection for me against the weather my boat's covering having been hopelessly rent, and by morning I had taken a severe cold This incident was all the more irritating, as I had suggested, in view of possible storms, that the boats should not be tied too close together; but they must have shifted their positions after I retired to rest

After changing boats and men at Pak Lai we proceeded on our way The river had now straight reaches for long distances, and looked extremely wild Enormous rocks lay all over the channel, well wooded mountains descended to either bank, but there were few villages Above Keng Luang an awkward and long rapid, the journey became more agreeable, and from Muang Nan upwards there were a number of villages

We passed no less mighty a personage than the man who "holds the spirit" of the chief of Luang Prabang. This fellow was sharp witted, and held an enviable position, for the old chief would never dream of undertaking anything without consulting him When called to attend to his spirit duties he prepared for a glorious spree, asking for home brewed arrack *ad libitum* and ordering the slaughter of a buffalo After a substantial meal, washed down with many draughts of good rice-liquor, he worked himself into a frenzy, and performed all sorts of contortions of the body, sometimes foaming at the mouth with his exertions He was then considered as possessed; questions were put, his answers to which were regarded as oracular, and this questioning was kept up until the possessed fell asleep from exhaustion and inebriation Strangers have always been anxiously excluded from witnessing these performances, and the custom seems to have pretty well died out, but still every one who can afford it has his spirit man

I was short of boatmen, and, as the spiritman man could steer I took him with me. He warned me that he was the devil, but this information was of little consequence He steered my boat in first-rate style, and at nightfall on May 29 we reached Luang Prabang Our journey had been a remarkably rapid one, for we arrived on the

evening of the fourteenth day from Nawng Kai. Had we been on the river a month earlier, we should have encountered greater difficulties. The river had risen, affording byways for the boats, where otherwise nasty parts of the rapids would have had to be faced.

A Me Kawng Rapid. low water season

CHAPTER XIV.

LUANG PRABANG CITY

To our great horror, the camp had been pitched in as bad a place as possible, and its arrangement was precisely the opposite of that which we had directed. The rains, however, had set in, and such heavy requisitions had been made on the inhabitants in the building of the dreadful huts, that we felt it would be impracticable to begin all over again.

It was reported that the Haw were at Muang Yaw, so we could not return to Bangkok, as a move in that direction would have made them imagine we were afraid, and would certainly have invited attack on Luang Prabang. We had to do the best we could, and as nothing could save the men from fever, we had a site at once selected for a hospital, and the building begun.

Phra Sokotai was to have protected Muang Yaw, and he had built stockades for that purpose; but before the Haw made their appearance he was attacked by fever, and came down to Luang Prabang, whereupon the Haw burnt his stockades.

Some members of the *Sanabodi*, or council, put in an appearance and asked that a day might be fixed for my visit to the chief.

The official letter, or *supa aksawn*, was laid on a silver plate and carried under a white umbrella, preceded by fifes and drums to the chief's house, the road to which was narrow, and at that season smelt very strongly. We passed through the principal market place, which had small sheds on each side for the display of goods. It being noon the market was deserted, and we picked our way as best we could through the slush.

When we arrived the principal Lao officials were assembled in uniform, and in a little while the chief himself came. He was a fine old man, seventy seven years of age, of a very gentle disposition, and much beloved by the people. I had read that Luang Prabang was

once tributary to Anam, and on my asking the old chief if such was the case, his answer was short and decisive "Never" He said that Anam belonged to China, and that Luang Prabang had formerly paid tribute to China every ten years, the tribute having been taken from Muang Sai to Muang Li of the Sib Sawng Pana to the Governor of Yunan, whom they called Chao Ta Wong. The tribute had consisted of 4 elephants, 1 mules 533 lbs of nok (metal composed of

VARIETIES AT LUANG PRABANG, 1885

gold and copper), 25 lbs of rhinoceros' horns, 1000 lbs of ivory, 250 pieces of home spun cloth, 1 horn, 150 bundles of areca-palm nuts, 50 cocoanuts, and 33 bags of the roe of the fish *pla buk*.

While we were enjoying a pleasant conversation with the old chief, a concert of bull frogs was kept up under the house

The market place of Luang Prabang was rather crowded in the mornings and it was interesting to stroll through the strange medley of men and women bartering and chaffering in their different jargons

Rupees were not exclusively used as money, but were melted

down, and entered largely into the manufacture of the numerous articles executed in handsome designs by the Lao. These comprised cylindrical boxes, basins, *mak* sets (for the usual betel and areca nut) and handles for daggers and knives

CHIEF OF LUANG PRABANG

There were more than twenty Burmans resident in Luang Prabang, and their headman had been over twenty years settled in the town. They carried on a trade with Maulmein in gum-benjamin, raw silk, indigo, wax, and cardamoms.

Raw silk, of excellent quality, was once plentiful all over the province Improvement was required chiefly in the winding of the

silk from the cocoons, as the method adopted produced coarse and knotted threads. The following is a list of prices of some of the produce:

One *hap* equals the weight of 2400 Mexican dollars, or 133⅓ lbs avoirdupois.

Gum benjamin, first quality, per hap	Rs. 200
Gum benjamin, second quality, per hap	Rs. 100
Silk (nai yawt), first quality	Rs. 500
Silk (nai pho), second quality	Rs. 250
Wax	Rs. 200 per 133⅓ lbs
Catch	Rs. 10
Cardamoms	Rs. 20
Klet Lin	Rs. 100

This last consists of the scales of the scaly ant eater (the armadillo), which are much used by Chinese and Lao for medicine.

The great difficulty is transport. The easiest route is by boat to Pak Iai, the cost being Rs. 20 for 6000 lbs. of produce, and thence by elephants and bullocks to Utaradit. It is the second part of the journey which is expensive. If as much care were taken of the elephants as is taken of their Indian brothers, and similar pads were used, each animal could carry 1000 to 1200 lbs.; as it is, 300 lbs. is a heavy load, and the transport takes from six to eight days. Each elephant costs Rs. 12 for the trip, but at one time the rates were according to weight.

Besides the products already enumerated, ebony, in large quantities, is found in the forests, also indigo and three kinds of cinnamon, *ke Iai*, *Ie mu*, and *Ie nang*. The best quality of cinnamon, *Ie nang*, sells for half its weight in silver, and is much used in medicine. There is also trade in rhinoceros' horns, used for medicine, in ivory, and in cotton, which was once plentiful but is not now cultivated in any great quantity. It was sold at the rate of ten *pong* for a quarter of a tical. At one time tea was brought down in large quantities from the tea gardens of I Bang and I Wu, at the source of the Nam U. The common quality was very black, but for the use of the chief rectangular blocks, 6 inches by 4, and of a light colour, were provided. The stamp, in Chinese characters, signified that the tea was prepared for Pekin.

The people of Luang Prabang have a decimal system of weights:

10 fin	1 te
10 te	1 hong
10 hong	1 khu or pong.

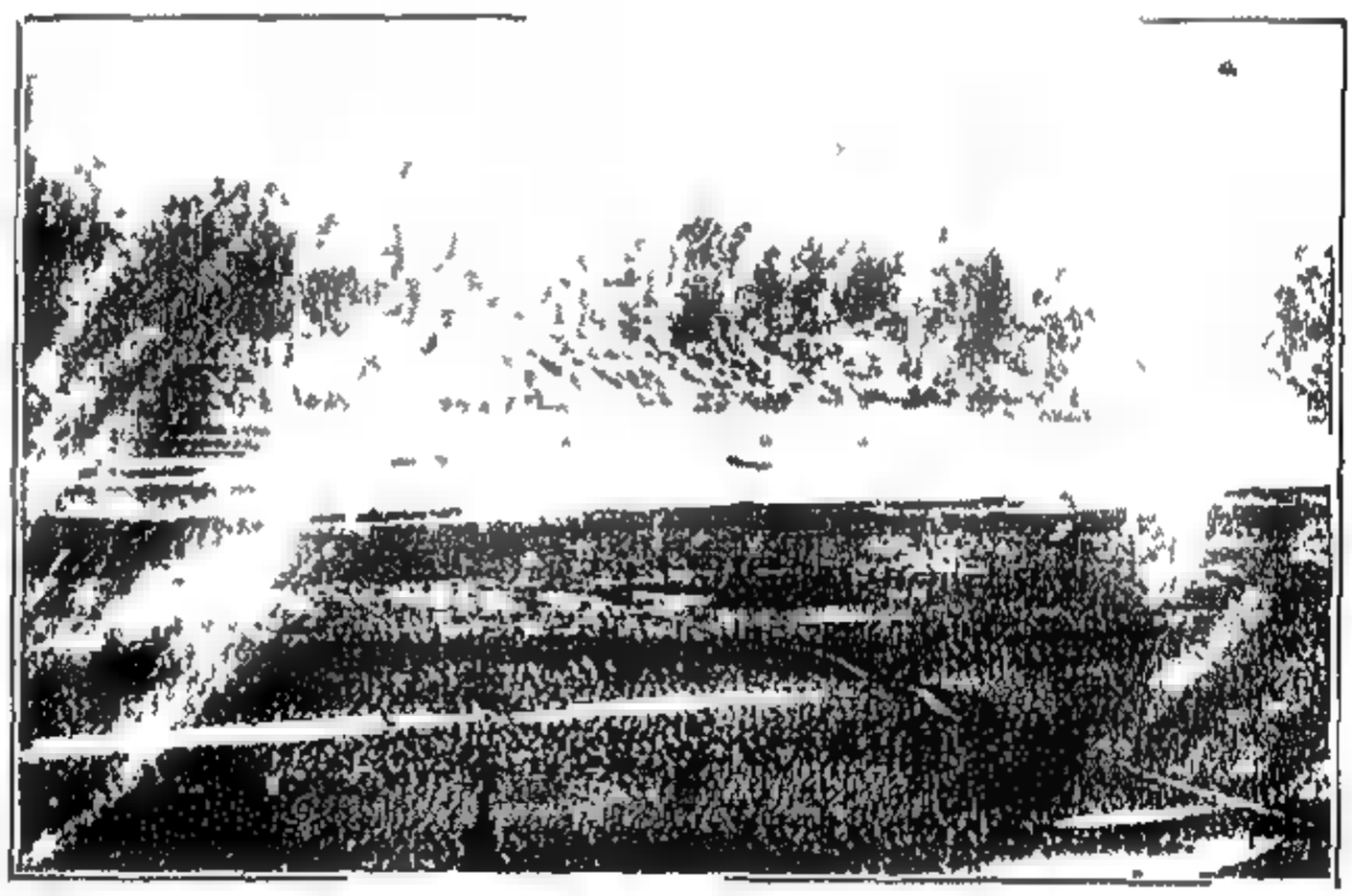
(One hong weighs 3½ rupees.)

10 pong	1 nawi (100)
10 nawi	1 pum (1000).

LUANG PRABANG MARKET PLACE FROM DR'S ROYALD BY HAW

The month of June in Luang Prabang is a very busy one for fishermen. Nearly all the boats are employed on fishing, each paying a large fish for the privilege. Two kinds of large fish, *pla buk* and *pla rerm*, are principally sought after. The latter, the smaller of the

two, of an average weight of 70 lbs, has teeth, and on the back a peculiar long fin, it has no scales, is of a dark grey colour, and not very appetizing in appearance. It is plentiful in March, April, and May, and is sold for about three rupees. A *pla bud* that I helped to take weighed 130 lbs, it was 7 feet long and 4 feet 2 inches round the body, the tail measured 1 foot 9 inches. The fish had neither scales nor teeth, and was sold for ten rupees. The roe of this fish is considered a great delicacy. The fish is taken in the sixth, seventh, or eighth month, or June, July, and August, when on its upward journey. Returning in November, it keeps low in the river, and a few stray ones only are caught. It confines itself to the Nam



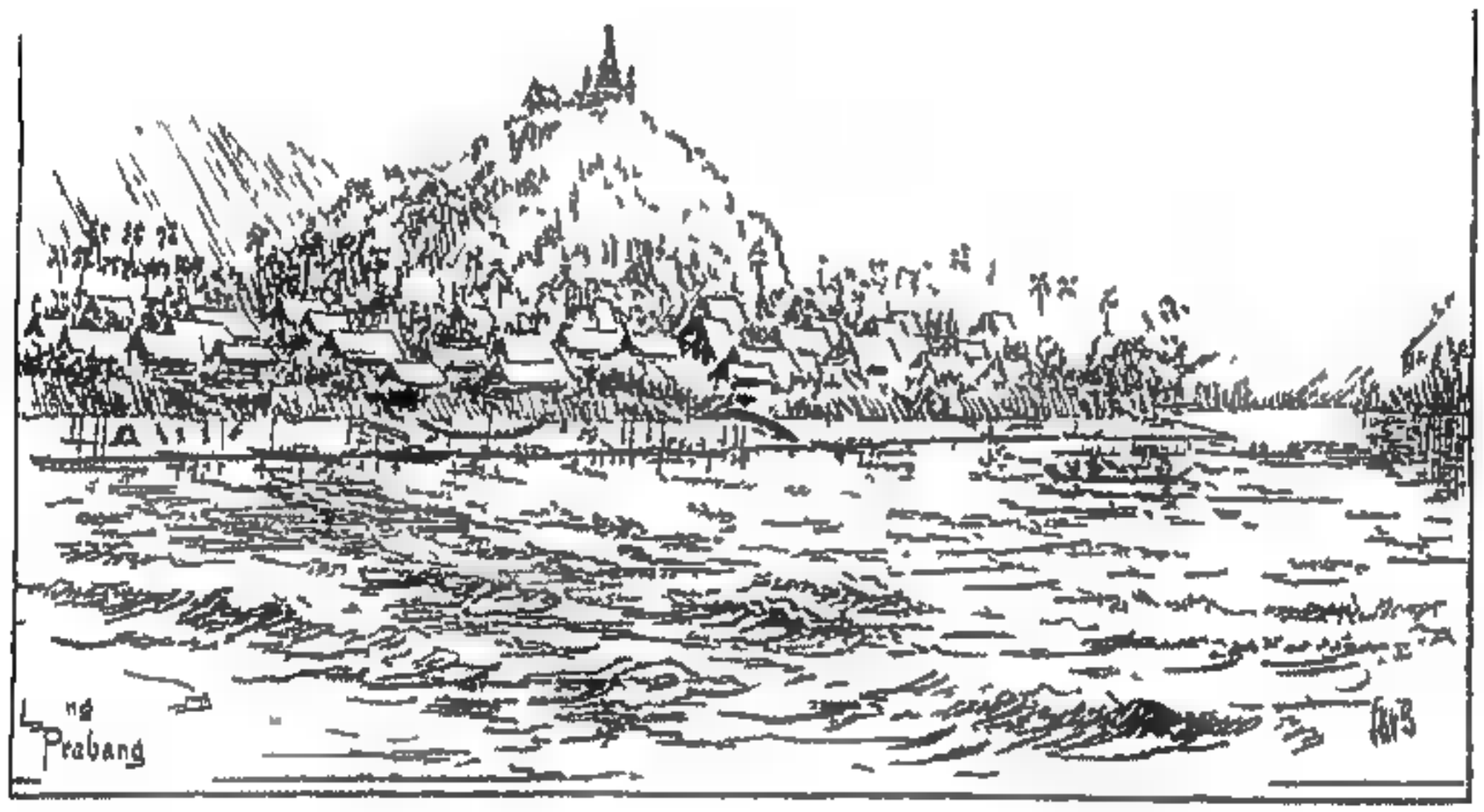
THE [redacted] KAWNG AT LUANG PRABANG

Kawng, and does not go up the Nam U, which the *pla nerm* seems to prefer.

The net for catching these fish is from 150 to 200 feet long and 6 feet wide, made of cord one eighth of an inch thick. This is dropped across the river from a small boat, usually by two men, and is supported at one edge by calabashes, used as floats, 8 feet apart, the other edge being sunk by stones placed opposite the floats. In June the water is almost red, and the fish, keeping near the surface are easily caught. The more they struggle the more firmly are they secured in the meshes, and the stones rattling against the side of the boat [redacted] the fishermen pull in the net, indicate a successful cast. This method of fishing is not without danger, for men have been known

o be dragged from the boat and entangled in the meshes of the net vith the fish

Those who take an interest in [redacted] serpents will be pleased to know that the Lao have a river serpent in the Me Nam Kawng It ives only at the rapids, and my informant said he had seen it It is 3 feet long and 20 inches thick When [redacted] man is drowned it snaps off the tuft of hair on the head, extracts the teeth, and sucks the blood; and when a body is found thus disfigured, it is known that he man has fallen a victim to the nguak, or river serpent, at Luang Prabang.



CHAPTER XV.

TRADITIONS OF LUANG PRABANG

WE visited the hill where stands the pagoda called Pha Chawn Si, said to contain Gautama's bones. The pagoda is an elegant structure, heavily gilt, built on an isolated limestone crag about 230 feet high, round the base of which lies the town, or rather large village. On the western slope there was a steep flight of steps leading to the top where a watchman was stationed whose duty it was to strike a big drum at proper intervals; if he failed in this the spirits would be very angry.

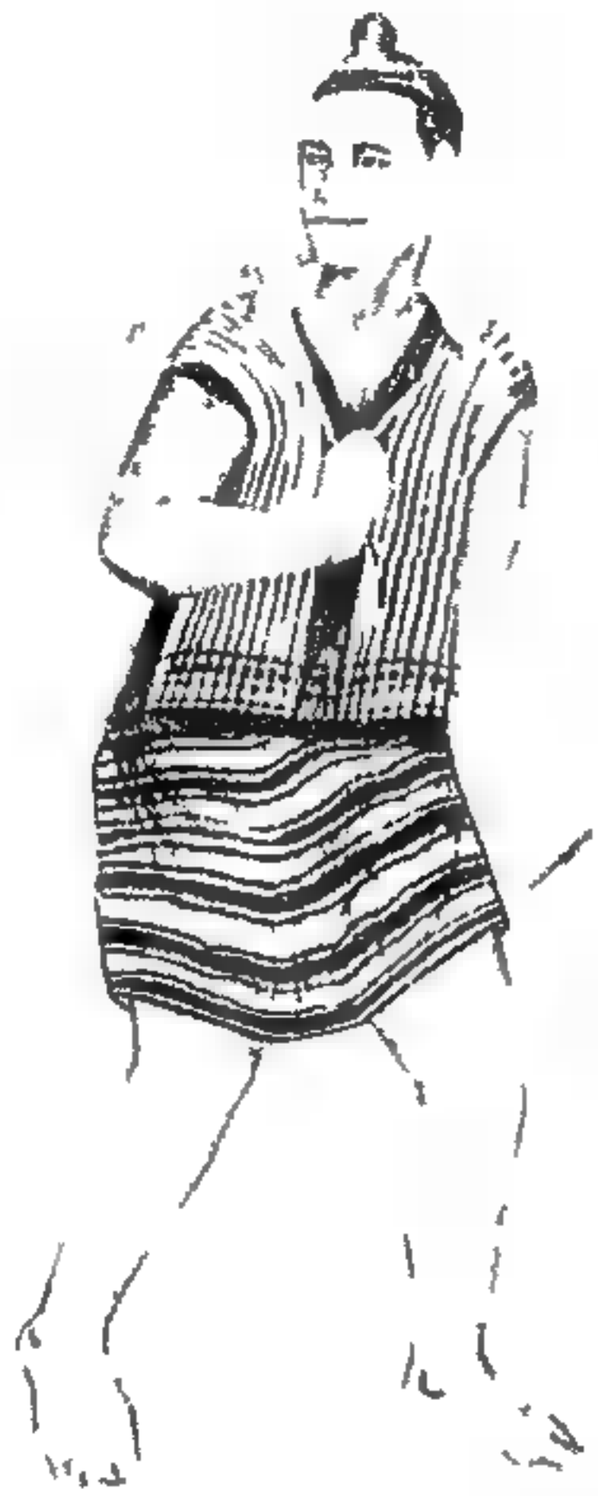
The entire population of the Me Kawng valley is strangely addicted to the worship of spirits, not good, but malevolent spirits, to whom every year cattle are slaughtered as propitiatory offerings.

Luang Prabang presents a beautiful view, especially in the evening, when the golden hues of the setting sun light up the mountains. The river, 1770 feet wide and perfectly still, may be seen for long distances, and the hills, sloping down to the banks, seem to enclose the broad waters, which thus assumed the appearance of a lake. The charm of the landscape is heightened by a pagoda here and there, some with domes, said to be very ancient, one of them alleged to have been built over a lime and a guava tree that could speak. Wat Pa Fang is said to have been built in the year 300, which in the Chula era would be the year 938 A.D., and this temple is the oldest known.

At Wat Luang religious rites were annually performed and festivities were held, in which the Kamu played a very important part. Here, also took place the ceremonies in connection with the accession of a new chief, where the headmen of the Kamus assembled and took the oath of allegiance, swearing to die before the chief, shot arrows over the throne to show how they would fight any of its enemies, and holding a lighted candle, prayed that their bodies might

be run through with hot iron and that the sky might fall and crush them if they proved unfaithful to their oaths.

On the right bank of the river is a small hill called Nang Meu. A legend says that a lady of this name when she died was changed into the hill, the outline of a woman in a reclining posture being faintly discernible in the evening twilight. On the left bank is the impression of a foot said to be her right foot, and a corresponding

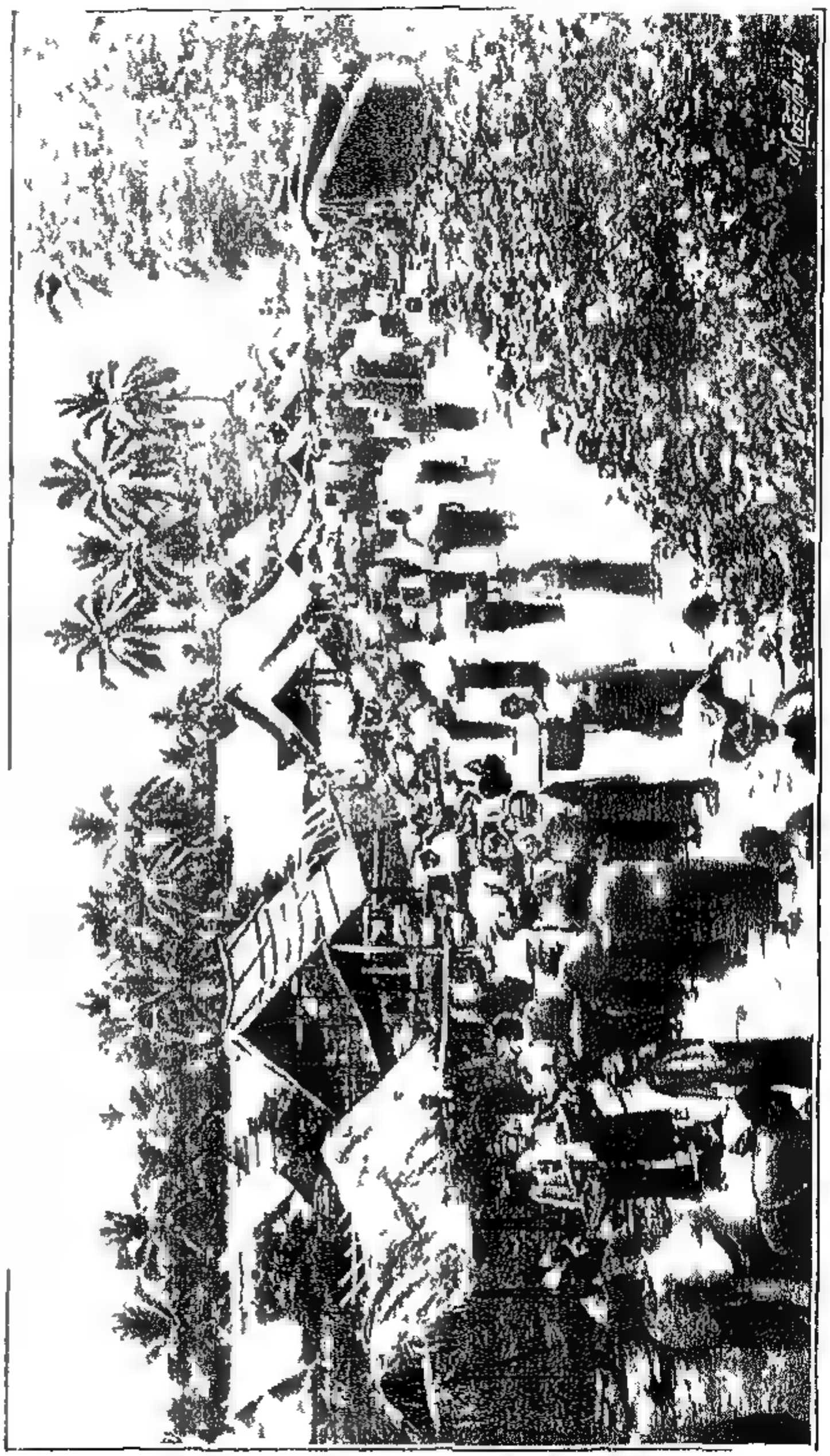


KA, OR KAMUK MAN NORTHERN SIAM

mark is shown on the other side of the river, indicating that her last step measured 1000 yards.

To the east is the hill called Pu Suang at the foot of which died the lonely scientific traveller, Charles Mouhot, whose memory is still cherished with kindly interest in the neighbourhood. His death, however, is associated with the superstition of the Lao, for they say that on the hilltop there is a great treasure, guarded by dragons which, even in our time, have been seen rising and struggling together in the air, and that whoever tries to ascend the hill is certain to perish in the attempt. Mouhot made the attempt, contracted fever,

and died, but it is needless to say many have reached the summit without meeting with death, dragons or treasure.



MARKET PLACE, LUANG PRABANG

Luang Prabang, one of the oldest towns of Indo China, has, very probably, the most interesting history. I was able, at odd intervals,

to gather the following traditional scraps from the eldest son of the chief:

The first king was K'un Borom, who lived at Teng (identified by Major Gerini as the Dasana or Doana of Ptolemy), where a tree grew that reached to heaven, and shaded the whole district of Luang Prabang. The king used to amuse himself by going up and down between earth and heaven until the evil spirits, wishing to keep him on earth, cut down the tree. The wood of the tree is found even nowadays, and, under the name of 'Kua Kao Kit,' is, of course, used as a charm against every evil. The king planted pumpkins, and

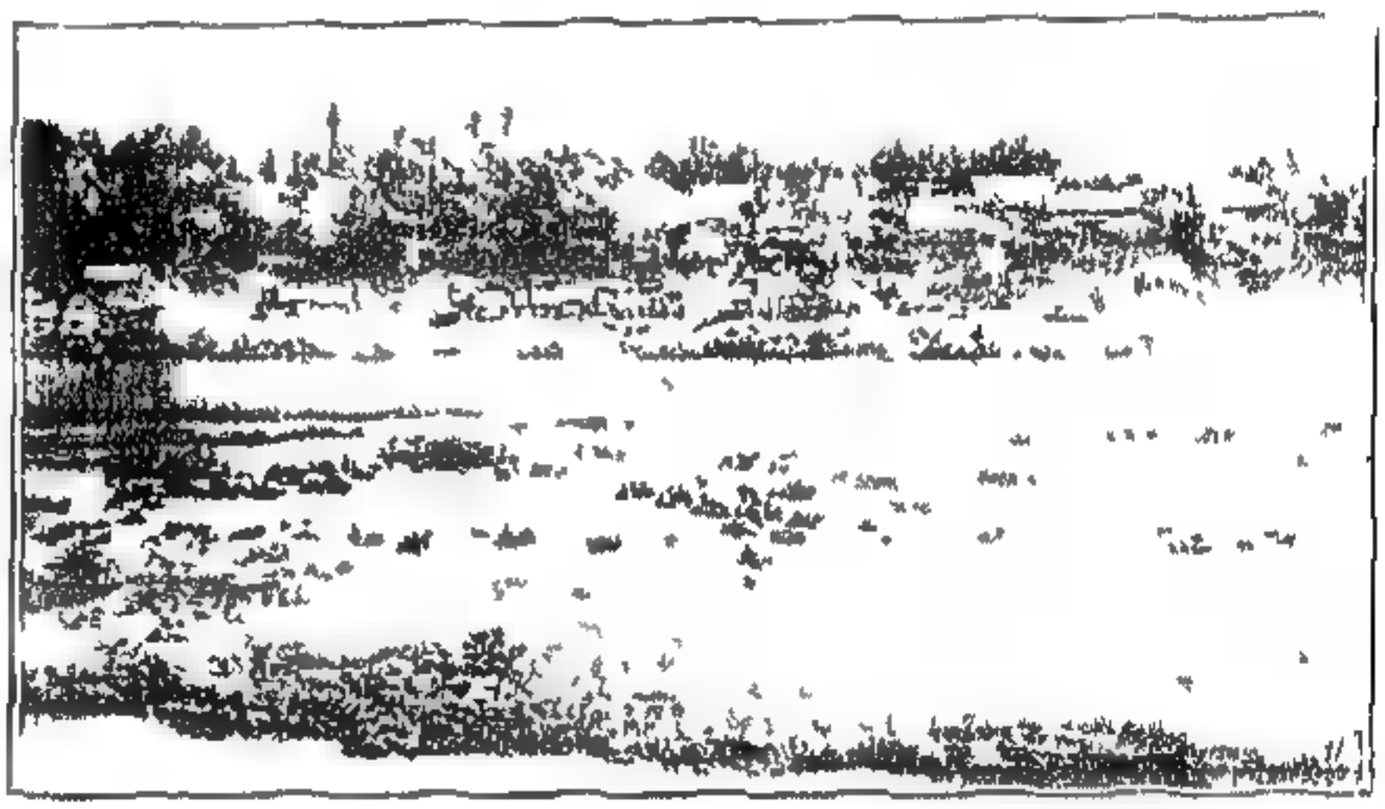
KA O L.

one day, to see whether a pumpkin was ripe, pierced it with an iron spear, whereupon, to his surprise, blood flowed from it. He waited a few days and then pierced another, when a black man issued forth, who became the progenitor of all the Ka Che, or Kamu. A few days later he pierced another pumpkin, when a white man came out, who became the progenitor of the Lao. In accordance with the tale the Lao look upon the Ka Che as their elder brethren.

As time went on both the Lao and Ka Che grew very numerous, so that it became necessary to find a new country, and rivalry sprang up between the families, though the younger brother's family, or the Lao, were admitted to be the cleverer. On the occasion of the exodus from Muang Teng the Lao, with their usual skill, used wooden boats

and rafts, whereas the Ka Che made boats of buffalo hide. Both went down the Nam Nua, but at a rapid called Men Kwan ("Smell of Buffalo") the Ka Che boats were broken and had to be abandoned. Thus the Ka Che were obliged to seek a helping hand from the Lao, who took them to the spot where the town of Luang Prabang now stands. There they founded a city called Sawa which grew to be very powerful, and held sway over the whole Me Kawng valley. The city was named after a large stone over which the pagoda Wat Chieng Tawng has been built.

History omits the story of the pumpkins, and says those who came first to Muang Sawa were the descendants of K'un Law, the eldest



THE MEKAWNG AT LUANG PRABANG

son of K'un Borom, by his wife Nang Pola. The second son was Chet Chieng, who founded Chieng Kwang, or Puan; the third son was Ti Palan, who founded Laksa Kuha, or Yunan.

The second wife had four sons: Chu Song, who founded Pa-Kung, or Anam; Lak-Kong who founded Hongsawadi (Pegu); Lai Pong who founded Chieng Dao, or Aleve (Chieng Hung, Siamese "Rung," the Lao having no *R*), Ki n In, the youngest, who founded Si Ayiw t'ia. Thus Muang Teng is regarded as the distributing centre of all the population of Indo China.

To settle the long-standing dispute concerning supremacy between the Ka Che and the Lao, it was agreed that the mastery should be given to those who should make the highest *chalco*, or small matting placed conspicuously to frighten spirits and tigers from the camp. The Ka Che set to work, but could not raise their *chalco* to any

considerable elevation. The Lao, tying them to the end of a bamboo, which when let go sprang up to a great height, easily became the masters, and, until quite recently, the Ka Che consequently supplied them with all that they required. In the old days a rupee purchased more rice than four men could lift.

For fifteen generations the chiefs had the title Kun, and for six generations the title of Tao. The name of the city was changed to Lan Sang (Siamese "Chang," the Lao having no *ch*), the meaning of the name, according to Phra Ruddhirong, the Siamese commissioner, being, "the plain among the elephants," as the surrounding hills are called *Sang* (Siamese "Chang"), or elephants. Then the name was changed to Luang Prabang, from the Prabang, a golden image of Gautama which, first set up in Ceylon, was carried successively to Cambodia, Luang Prabang, Wieng Chan, Bangkok, and finally back to Luang Prabang.

In the beginning of this century Luang Prabang was destroyed by Wieng Chan, from which it had long been separated. Its chief, Anuata, and his son, being taken prisoners, were sent to Bangkok, where they remained for twelve years. Dying twenty years later, this chief was succeeded by Mongta, who ruled for twelve years, and was followed by Chao Luang Serm, who, in turn, after nineteen years of government, was succeeded in 1870 by the late chief, Chao Luang Un Kham.

BUDDHA.

CHAPTER XVI

SICKNESS IN THE RAINS WITHDRAWAL TO BANGKOK THE PARADISE ROUTE.

As our work could not be carried on during the rains, Leonowens returned to Bangkok Bush, as he wished, remained, and I sent seventy soldiers down to Nawng Kai, a comparatively healthy place, to be at the disposal of Phra Kaj the general who was marching to dislodge the Haw He, however, showed his opinion of the men given to us for soldiers by dispatching them back to Bangkok as soon as the rainy season was over

The rain poured down steadily, and sickness prevailed I was bowled over with fever, and all my servants were ill Bush, who had been complaining off and on, seemed to be getting worse, and I had him accommodated in my bedroom, so as to be able to look after him better

On the evening of June 29 he had a violent attack of fever, and sank rapidly. By half past eleven all was still Tired and ill, I could not think that my companion, only twenty-one years of age, was dead, but, to my grief, it was only too true

His death was a great blow to me, but I found a friend in the person of the Governor of Pichai, than whom no man could have been more kind and considerate He did everything in his power to arrange for the proper interment of my friend, whose remains, duly coffined, we placed in the grave dug near Wat Tat Miserable and ill, I saw no good in staying. I could drag along, but should not be in a fit condition for the heavy work after the rains, and it seemed better to return to Bangkok and prepare for the next season

On July 5, taking leave of the kind old chief, who had provided me with comfortable boats, I turned my back on Luang Prabang It was a pretty place, but during the rainy season decidedly unhealthy

for old residents and strangers alike There was no drainage whatever and after a shower the effluvia were so heavy that one fancied them settling like a fog The fevers contracted are not of the ordinary type; violent retching comes on and the patients sink and die In some cases in less than twelve hours the disease has done its work It was not uncommon for a man to be perfectly healthy in the evening, seized by a fever during the night, and a corpse next morning Some go perfectly mad. The Chinese seemed to have a great dread of the place during the rainy season not a single Chinaman would remain. The traders came from Nawng Kai and Pichai during the dry season, but were off before the rainy season

The journey down stream was very quick, and I reached Pak Lai in the forenoon of the third day The river was not recognizable, the whirlpools were apparently dangerous, but the boatmen were wonderfully expert

We started from Pak Lai with the sick the march, although short, was too much for them and we halted for a day at Muang Wa The path to the pass over the main watershed was very easy and comfortable, but the western side as far as the camp on the Nam Pat was roughish, and very trying for the sick. I pushed on to Yandu, the nearest village on the Me Nam, in order to get to the boats as soon as possible One, unfortunately, died, but the rest reached Yandu safely. The sight of the Bangkok river gladdened the poor fellows' hearts, and the boats in which we descended, small though they were, proved a comfortable change for every one.

We reached Utaradit, which consists of a long stretch of houses on the right bank of the river, with a large Chinese population It is divided into three parts the northern, Pa It, the Middle Utaradit, where the governor lives, and Ban Po, the Chinese division, as I may call it It is a great trading centre for Lao and Yunan produce, which is here collected for transit to Bangkok and other places Transport arrangements, however, are very defective Strangers are unable to secure the boats necessary for the downward passage, and the difficulties of the return journey are still more serious, so that traders prefer to strike westwards overland Thus it happens that produce valued at many thousands sterling is annually taken to Maulmein instead of to Bangkok

To the west of Utaradit is the shrine of Pra Ten, of modest dimensions, of the usual Siamese style of architecture, and heavily

gilt The doors said to be very ancient, are large and magnificently carved The catafalque built over the rock is we were told about 12 feet long 6 feet broad, and 2 feet high, richly gilt In the centre is a hole about 6 inches in diameter, through which the people pour their offerings of gold leaf Around there are countless images of Gautama, with wax tapers burning in front of them at which occasionally the devotees light their cigarettes, with, to a stranger, a rather comical effect While one man is devoutly attending to his tapers, another, with cigarette ready, is intently watching his opportunity, and suddenly jerking down, holds his cigarette at the light, but this is so usual that no one notices it There are a number of priests, some of whom drive a good trade with their nostrums for all sickness and charms against all evil.

From Utaradit there are trade routes to P're, Sawankalok (the ancient Sajanalai), and Sukotai The story of this last place is interesting, and is told as follows :—

Chao Abhaya-Gamani, the King of Sukotai, became a hermit, and lived on Kao Luang towards the west. The grand-daughter of P'ra Nak, the king of serpents, came from the ground, and having changed herself into a beautiful woman, abode with the hermit king for a week.

When they parted, the king gave her a ring and a silk turban as tokens, and arranged that on a certain day he should come with all the women of Sukotai and take her in procession to his capital When the day arrived he came as he had promised, but there was no beautiful princess, and he returned in anger to his home. The time reckoning of serpents and of men differed by a day, and when the woman, arriving with her child according to the agreement as she understood it, found neither king nor retinue, she in turn became indignant Lamenting her misplaced confidence in her royal lover, and placing her child and the tokens in the hermit cell, she resumed the form of a serpent.

Within the forest were two hunters, who, overtaken with thirst, bethought them of the cell, arguing that had there been no water there it could not have been the dwelling of the hermit-king. They approached the spot, and finding, to their surprise, the child with the ring and the turban, they took the defenceless infant under their care. This, according to the tale, was in the year 1240 of the Buddhist era, or 697 A.D.

When the child was ten years of age he accompanied the hunters

to witness a ceremony connected with the raising of the top of the royal palace The youthful spectator pointed out that the top was leaning over, and was about to fall in a particular direction The accuracy of his observation was verified by the collapse of the structure, and when the incident was reported to the king he commanded that the hunters and the boy should be brought into his presence When he had heard the hunters' story he recognized the boy as his child, and gave him the name Arun Rajakumar At this time Sukotai, though a powerful state, was tributary to P'ra Chao Kambuja, King of Inthap'at (Cambodia), but now, on the advice of the young prince, the king renounced his allegiance. To seize the instigator of this revolt the King of Cambodia sent a sacred man, Khom Dam Din, who could dive through the earth The prince, then about thirteen years of age, was in the monastery sweeping the grounds when the Khom suddenly made his appearance, inquiring for his intended victim The prince, however at once transformed him into a block of stone, the remains of which are still to be seen, but are constantly diminishing, being carried off by the inhabitants piece meal to serve as charms against all evil * The prince, growing up to manhood, married the daughter of P'ra Ba Tamarat, King of Sajanalai

The King of Sajanalai, accompanied by his brother, P'ra Kidhi Kumar, then went in a thirty oared boat to the land of the Chinese, where their presence brought about an eclipse of the sun The Emperor of China sent to inquire the cause of the darkness, and K'un Keo Amat reported the arrival of two Siamese princes. This seemed in accordance with a prophecy which now came to mind, and which was completely fulfilled when the emperor bestowed his daughter to be the wife of the King of Sawankalok, presenting him with half his seal of state and sending a thousand men to escort the princess to her new abode The attendants, settling in Tao Tuian, above Muang Kao (old city) in the Sawankalok district, where there are fields of kaolin, carried on the manufacture of pottery, as did their descendants after them, until, owing to the Burmese incursions, the art was lost The brother, P'ra Kidhikumar, married Nang Malika, a daughter of the King of Chieng Mai.

We pushed on to Pichai, where I met with the greatest possil

* Major Gerini investigated what remained of t[redacted] stone and found it to be [redacted] ton of an old statue

kindness from Phra Utharakan, the governor, a relative of my friend at Luang Prabang. He very kindly made room for me in his house, and I was very soon settled. There we had the Siamese music, which I have always liked, the music of the bells reminding me, somehow, of the sound of a cascade. It is strange to hear "Yankee Doodle" and 'Wait for the Waggon' rendered on Siamese instruments.

The river had overflowed its banks and a number of people, the majority being women, had assembled in their boats for races. A special feature of these races is that the boats' crews are either all men or all women, never mixed. The women are young and marriageable, and, in fact, have only come for a grand flirtation. They challenge a boat of men for a race. In the boats there are more priests than laymen, in some cases priests only, and in view of the celibacy of the priesthood the circumstances tend to scandal.

Phra Utharakan told me of great floods that had occurred a few years before, when the water ran red, and the fish were poisoned by a plant called by the Lao "idam" which only grows in the Lao country. Two kinds of fish, called *pla mew* and *pla chom*, escaped, being able apparently, to leave the river and take trips across country.

The Lao have recourse to the ordeal by water, in illustration of which Phra Utharakan told of a case that happened to a hunter. He had shot a deer, and had tracked it by the blood to a river. There he met a man with the deer at his feet and his spear through the hole caused by the bullet. Each claimed the deer, the spearman asking the rifleman to show the marks of his bullet. A petty magistrate came on the scene, and decided they should go through the water trial. One had his face up stream and the other down. At a signal both went under water, and the spearman, rising immediately and offering the magistrate a bribe, which was accepted, went down again. Then the rifleman appeared, offered a bribe, and was allowed to go down again. The spearman immediately bobbed up, and was hurried off as he was, out of sight. The rifleman on rising again was accused of being the cause of the other man's death, upon the pretence that he had not yet come up. The rifleman was glad to make off as he was, and the magistrate collected his fees in the shape of the men's clothing, spear, gun, ammunition, and deer.

In the annual speech from the throne his Majesty, referring to our work, was pleased to say, 'The expedition has during a few months' work succeeded so far to our entire satisfaction; but, to our

deep regret when the rainy season set in the expedition suffered severely from sickness, so much so that few men in the force entirely escaped, and we lost a most promising young European officer, and were compelled to recall the expedition The surveying expedition will again proceed, on the approach of the dry season, to resume the work originally held in view, much of which is yet unfinished, and it will return to the capital before the setting in of the rainy season'

BUDDHA

CHAPTER XVII

MARCH THROUGH MUANG NAN

At the last moment Leonowens gave up the idea of returning to Luang Prabang Mr E J Collins, an old schoolfellow whom I had not seen for twelve years, joined me from the Indian survey to help in my work in Siam

An escort of thirty marines accompanied us, and Lieutenant Rossmussen, of the Danish artillery, was in charge I was instructed 'to consult with the two military commanders, Phra Rajawuanakul and Phra Picha', who had been desired to take vigorous steps for the suppression of the Haw, 'to look after the safety of the survey party, and to render every assistance

Starting from Bangkok on November 12, 1884, we passed Chainat, the teak revenue station, and then a curious bend in the river, with a number of small hills on the left bank, beyond which the Me Nam bifurcates

After a straight run, with low hills on the eastern flank, Nakawn Sawan (the "City of Heaven") was reached

We accomplished the journey thither in comfort and ease, and passed on to Paknam Po, at the junction of the two streams, which, after receiving all the waters of the northern part of Siam, commonly called Lao, form the Me Nam Chao Phra The varieties of boats used on the river are remarkable, and some are peculiar to different rivers The Kwe Yai (main branch) from Nan is narrow and deep, the Kwe Noi (minor branch) from Chiengmai is shallow and wide, in some places, as at Rahong, 800 yards in width

We pushed on to Utaradit, where we left the boats and took the land route to Nan by Muang Fek

Some of the transport elephants having run away, I was delayed, and had to make up for the detention the next day by walking to

M Hin, a march of more than eleven hours The latter part of the journey was lighted by excellent torches made by splitting the ends of dry bamboos, growing along the sides of the path

PHYA PICHAI, WHO DIED AT LUANG PRABANG

The march onwards to Nan was over interesting country, through numerous paddy fields that had been well irrigated

Nan is the most flourishing town of all the Lao Pung Dam division. The people are well to do under their old chief, who has ruled justly and firmly for upwards of sixty years. He is descended

from the man who led the Burmese army on its way from Lai to Nan into an ambush, where it was slaughtered in the stream now called Sam Pan He was about fourteen years of age when he fled with his father, a refugee, before the Burmese army to Sawankalok about 1815 A D Several of his sons hold important posts in the administration and none who break the laws escape punishment

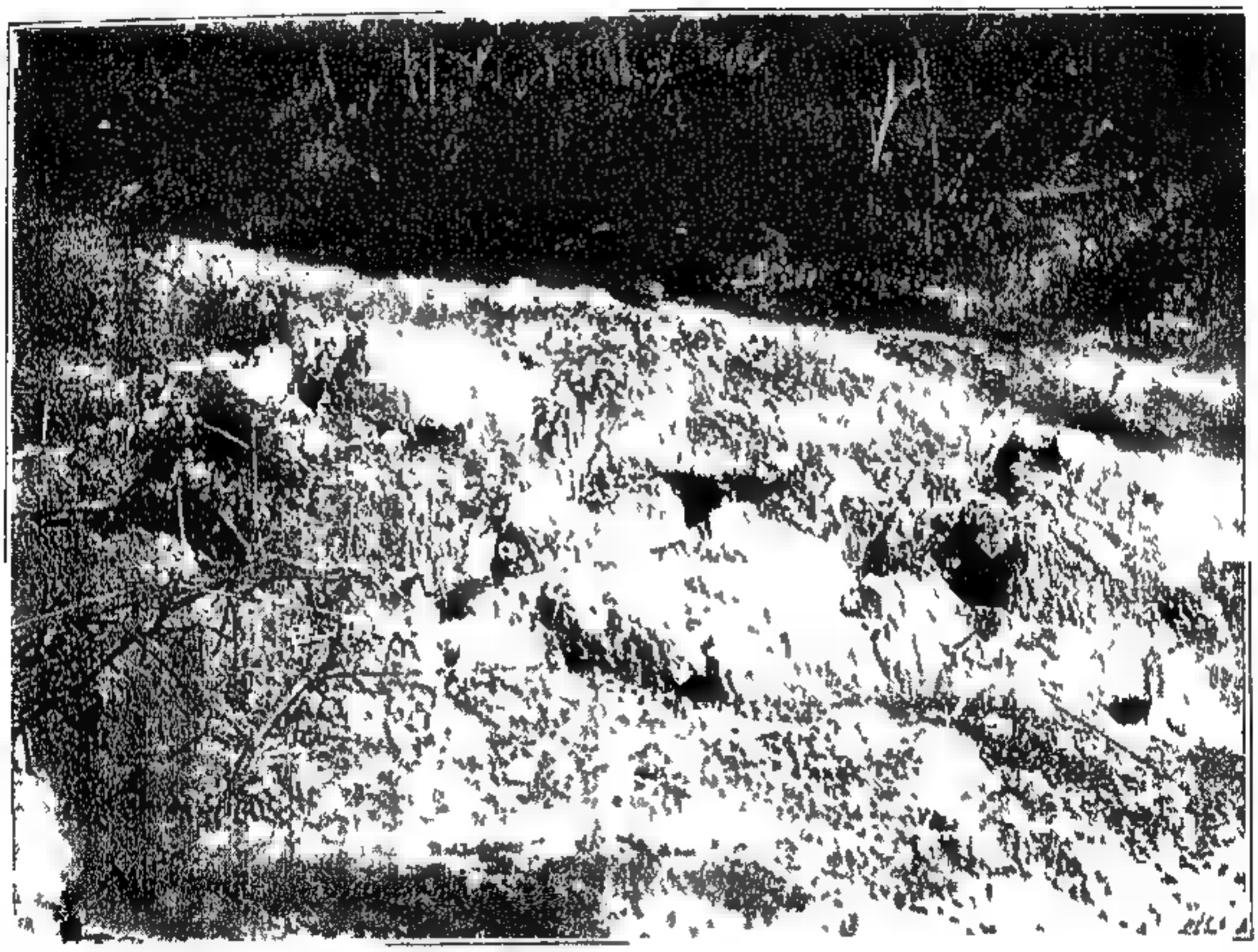
Three years before my visit there had been great floods. After heavy rains lakes had formed in the Nam Yao and Nam Yang, tributaries of the Nan. The banks burst, Muangs Uen, Yang, and Yom were totally destroyed, and a great number of lives were lost The walls of the city of Nan, about 2 miles in circumference, were damaged, but promptly repaired

The rice fields are cultivated to their full extent, there being an excellent system of irrigation, which is not allowed to fall into decay Advantage was taken of a large swamp, and by piling earth in a circle a reservoir was formed, which supplies hundreds of acres of rice fields, the soil being particularly productive. According to a simple calculation, the number of men and women who annually contribute rice to the common store in the city is 60,000. The population of the whole province I would estimate at 250,000, of whom 50,000 are in the portion of Nan beyond the Me Kawng Thousands of emigrants from Sibsawng Pana, and Kamus from Luang Prabang have settled in the province, and there is a growing population of Meo and Yao Nan was justly governed, and crime was punished in a manner which, if drastic, was effective. Theft was punished by decapitation, a severity which was supported by the belief that nearly all robberies are accompanied or followed by murder, and that, though possibly in ten years one man may lose his life for theft alone, any relaxation of the law would be followed by a far greater loss of life

Near the source of the Nam Nan, and in the vicinity of the main watershed, are several salt wells, from which an excellent supply of salt is obtained These wells are jealously guarded, and the fears of the people are excited by stories of the punishments inflicted by the spirits on those using them wrongfully Certain people have the privilege of working them, paying one rupee for four *muns*, about 530 lbs The wells are from 30 to 40 feet deep, and it was said that three buckets of water produced one and a half of salt In the rainy season they are constantly worked, but in the dry season they

run dry, and work ceases. There is nothing to show how the presence of salt was discovered or what suggested the sinking of the wells; the people say they are very ancient. The teak forests of this region are the finest in Siam. The existence of gems is reported from various quarters, and when the geological examination of the district takes place it will be found rich in minerals.

Collins and Rossmussen took the land route by Muang Hung to Luang Prabang, while I went by the northern and quicker route to Tanun on the Nam Kawng.



VIEW OF CRATER

En route we passed through Muang Luak (since called Hong Sawadi), which is a plain about 10 miles long and 6 miles broad, surrounded by high steep hills. Rising a couple of hundred feet above the plain are two active volcanoes, known as the 'Great Fire hill' (Pu Fai Yai), and "Small Fire hill" (Pu Fai Noi).

I visited Pu Fai Yai, and found a path to the top. The crater is about 100 yards long, 50 yards broad, oval in shape, with one end about 50 feet higher than the other, like an oblique section of a

cone. It had the appearance of extensive excavations from the different heaps smoke was issuing, and from some there were very offensive vapours. If dried sticks were inserted into some of the issues there was a low rumbling noise as of bellows playing, and immediately they burst into flame. In others the volumes of smoke increased, but there was no flame or accompanying noise. As the day advances the mists rise, and while the sun shines there is less smoke, but the flames are constantly playing, and there is the same

EXTERNAL VIEW OF VOLCANO TU TAU YAI

rumbling noise. The people are afraid of the volcano and attribute it to very bad spirits. Some of the minerals at the volcano are sulphur and travertine, eisen kiesel (clay iron ore, plentiful all over Siam)—when hot it is soft, and can be pulverized between the fingers—sulphate of alumina and potassa, native alum, hydrated peroxide of iron, limonite, native sulphur.

Arrived at Tanun, we took to boats and had a pleasant passage down the river, shooting at peacocks, which were plentiful. On one occasion a peacock was seen tumbling on a sandbank in a most

extraordinary manner. The boatmen said it was attacked by a small hawk, which fastened under its wing. Thinking that it would be so intent on its savage purposes that we could make an easy capture, we pulled up, but on our approach the hawk flew off, and the peacock managed to scuttle into the jungle. The boatmen said the peacock would not escape, as the hawk, which was not twice the size of an ordinary house sparrow, would return to the attack, actually feeding on the living bird, and repeating its meal at intervals.

We visited the cave opposite the mouth of the Nam U to which was made easy by a flight of steps. It was not very large, but contained from one to two hundred images, varying from inches to as many feet. A beautiful little pagoda built within looked charming in the glorious sunlight.

A Nam U Vill

CHAPTER XVIII

OPERATIONS AGAINST THE HAW.

When we arrived at Luang Prabang Phra Pichai had already left with the Luang Prabang contingent for Tung Cheng Kam. I paid a visit to the old chief, who, though suffering from a slight attack of asthma, looked very well, and appointed his eldest son, the Chao Rajawong, to accompany me to Tung Cheng Kam.

Collins and Rossmussen brought the Nan elephants to Luang Prabang but the Nan officials refused to go further without an order from Bangkok. Knowing that the most urgent want was that of supplies, we loaded with rice as many elephants as could be got together, and set out, following the route which Phra Pichai had taken with his contingent. Every day my surprise increased at the light-hearted manner in which the transport of large numbers of men across a rough country was undertaken.

At Ban Le of Wieng Sen I received a note from Phra Pichai, requesting me not to come to Tung Cheng Kam, as provisions were short. Our transport coolies had run away, but I sent forward a supply of rice on the nine elephants we had brought. It was arranged that Phra Ra from Nawng Kai and Phra Pichai from Luang Prabang should reach Tung Cheng Kam on a fixed day, and in concert attack the stockade of the Haw, if the latter would not surrender.

Phra Raj had spent his youth in the precincts of the court, and was annoyed that he had been appointed to act in concert with Phra Pichai, who was a country-bred man. Besides, he had a thorough contempt for the Haw, and was quite persuaded that his mere presence would make them flee or surrender. Consequently he

took things in a rather leisurely way, and, like the great Napoleon depended on the enemy for supplies

P'in Pichai was anxious to carry out his orders to the letter, so he hurried along a very rough route, over mountains and down rivers, with a large and scantily provisioned body of men and reached Tung

LIEUTENANT ROSSMUSSEN AND GUARD AT WAI PAN SIN.

Chieng Kam on the day appointed Being utterly unaccustomed to command, he found himself at the head of an undisciplined rabble, and the Haw were irritated into assuming an attitude of resistance. He made a stockade, taking up a position about 2 miles from the Haw defences, and there he remained for more than a month, awaiting

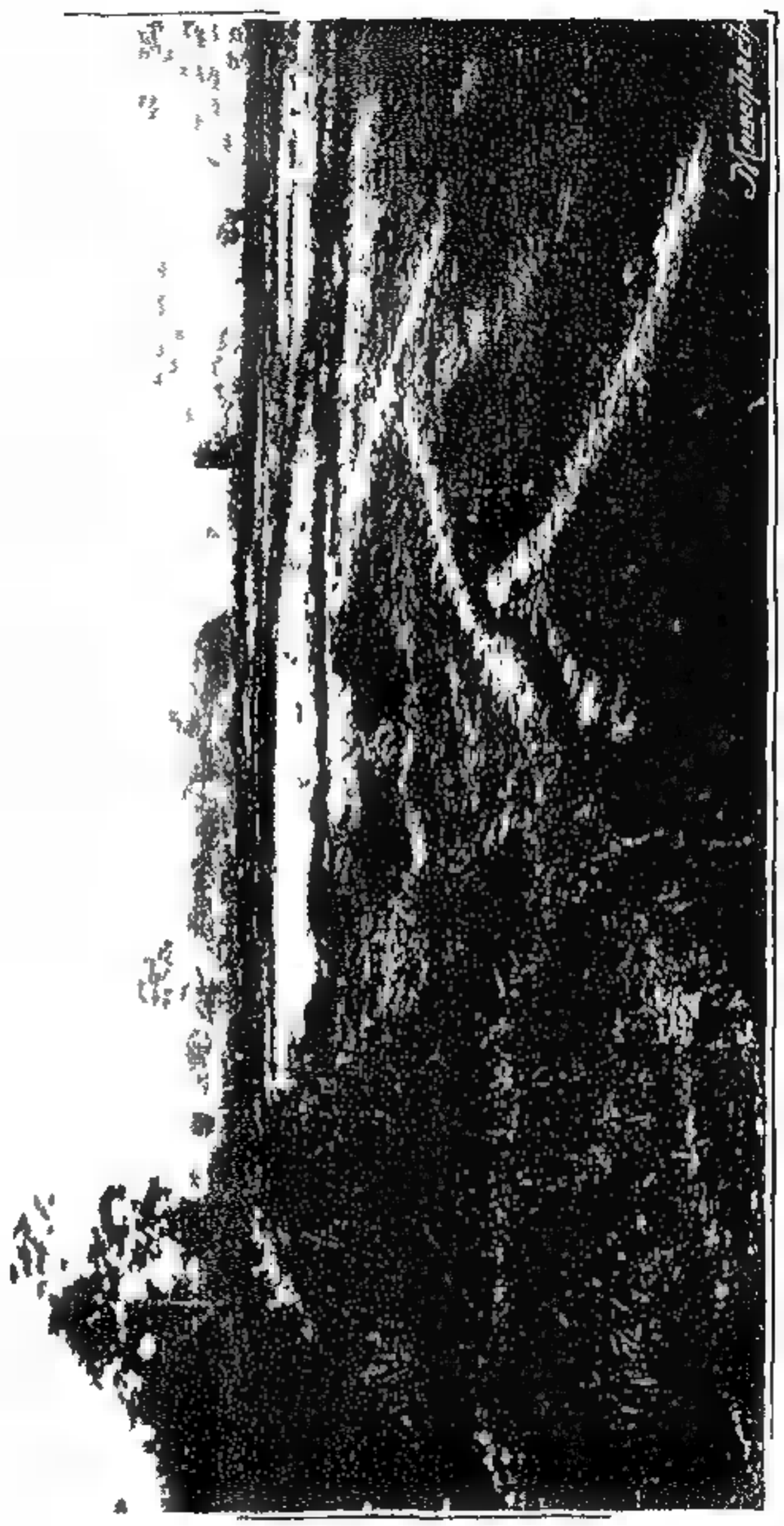
the arrival of his worthy colleague, who was later on and amusing himself by the way. Pra Ram course of time appeared at Tung Cheng Kam, unfortunately not at with which "the country general" as he called his colleague. The "country general" had an unpleasant time, but he did all he could to bring matters to a successful issue. He placed himself unreservedly under Pra Raj who made a new stockade about 500 yards further on than the other. Pra Raj was fully persuaded that the mere knowledge of his arrival had been enough for the Haw, and that they had already deserted their stockade, his scouts having reported that there was not so much

SIAMESE VILLAGE

as the sound of a fowl to be heard there. He went out to make a reconnaissance in person, but when he got within rifle range a shower of bullets convinced him the place was not deserted, and he had to beat a hasty retreat. Then he formed his plans for attacking the Haw, and getting rid of them, as he said, in half an hour.

It was then that, with Collins and Rossmussen, I arrived at Tung Cheng Kam, having pushed on in consequence of a letter from Pra Pichai, requesting me to meet the two generals for a consultation about the work. Here the Haw had been carrying on their operations with their usual barbarity. At the bottom of the dark ravine were the corpses of two Lao that had recently been beheaded, and tales

of fresh cruelties were told The Haw had sent out scouts to watch for messengers or stragglers from the camp, an unfortunate Khamu had been seized, his fingers and his ears cut off, and the mutilated victim sent back as a warning to those who were carrying supplies The wife of this man was also taken, and, being *enceinte*, she was



HAW BLOCKADE AT TUNG CHENG KAM, BESIEGED BY SIAMESE

killed, for it was believed that the blood of an unborn babe rendered the powder with which it was mixed unfailing in the destruction of life Round ticals were also used as bullets, as they, too, were charmed to render them fatal.

On February 22 we reached the field of battle The oracles were

consulted, and it was decided that ten o clock in the morning was the right time to fire the first gun in the attack on the Haw About eleven o clock we found the men hard at work, and the cannonading was being vigorously carried on

Moving to within three-quarters of a mile of the Haw stockade, Rosmussen and I had a fairly good view of the operations The stockade, about 400 yards long and 200 broad, was surrounded by growing bamboos, which made it difficult to see into it There were seven towers about 40 feet high, and the constant puffs of smoke seemed to show that the greatest execution was being done from them North, west, and east were open rice fields, to the south was jungle. The Siamese had surrounded the stockade on the north and east by the Luang Prabang contingent and men from Pichai and Sukotai, and on the west and south by the contingent from Nawng Kai. The north and west sides were well in view, and it seemed that the assailants were advancing in columns of about 50 men, carrying several white elephant flags, each company being provided with an Armstrong six-pounder mountain howitzer They seemed to be moving to take up their positions behind a temporary palisade already constructed by men who had advanced bearing shields of double rows of bamboos These shields were very heavy, and the men carrying them were wounded in the arms and feet, which it was impossible to protect

The cannonading went on briskly on each side, but apparently a good deal of it was only noisy display With the small arms, however, considerable execution was being done The Siamese planted themselves within 100 yards of the stockade, and proceeded to make a palisade Many men were retiring from the stockade in groups of twos and threes, some poor wounded fellows riding on ponies or being carried They seemed indifferent to their wounds, and all appeared in excellent spirits.

About two in the afternoon each side ceased firing and there was a lull in the operations About three the firing was resumed more vigorously, and a short time afterwards the news came that Pra Raj was wounded He had been struck by a shot, weighing about two pounds, which had glanced off one of the posts of a Chinese joss house, where he was standing, and struck him in the leg.

Evening came on and the stockade had not yet been taken, but the firing was kept up all night, and shouts of defiance from each side

could be heard at a great distance. It was known the Haw were inveterate opium smokers, and if the firing was kept up, not being able to sleep, they would be fagged out The Siamese loss for the day was serious, about fifteen men belonging to P'ra Pichai's detachment being killed, and twenty wounded, while of P'ra Raj's men not less than fifty had been killed and wounded

The Siamese settled down to a regular siege, charges were made on the Haw stockade, but as one section did not act in concert with the other they were repulsed with heavy loss. The stockade of the Siamese was daily filling with wounded Collins and Rossmussen performed the work of doctors, dressing the wounds of about forty men daily Some of the wounds took hours to dress. Rossmussen had nerve for surgical operations· his method of extracting some of the bullets might have made a doctor stare, but it eventually gave the men relief

One day, when all was quiet, Rossmussen and I went within 400 yards of the Haw stockade, and observed that the roofs of the towers were made of grass Rossmussen, who was an artillery officer, immediately suggested to P'ra Pichai, who had come to warn us to leave, that he should use heated shot, and thus set the towers on fire. The idea was adopted, but the details were to be carried out by the Siamese themselves

Bamboo scaffoldings were erected opposite each tower, about 40 feet in height, that being the height of the towers, and the howitzers were hauled up to these platforms The powder was rammed home with grass for wadding, a cylinder of wood was introduced, then the hot shot poured in and immediately fired off So far well, the signal was given, P'ra Pichai's gun at the north-east corner responded, and the tower was in flames in a moment What were the other guns doing? I was told that one of the hot shot fell fizzing into the midst of a crowd of Siamese, who were quietly smoking at the foot of one of the scaffolds. The Haw were quick to see that these grass roofs were now a source of danger, so they promptly denuded the towers of all inflammable covering The north east tower was, however, burnt

Another plan was suggested. The men were to move up in parallel columns carrying firewood before them, so that the palisade of the stockade might be reached and the whole set ablaze. Some days were spent in collecting a great stock of firewood, but as soon as it was all heaped up in front of the first parallel, the Haw set it on fire,

and the Siamese had to fall back under a heavy shower of bullets, which added many to the list of dead and wounded.

The Haw had a trick of making sorties at night, each man carrying in his hand a small canvas bag, holding about two ounces of powder. These they would ignite and throw among the Siamese. The flash enabled them to see their victims, whom they would spear, and then creep back to the stockade. The Siamese would blaze away in the direction of the flashes, and thus often killed and wounded one another. A Haw was capured one night, but was already mortally wounded, and only lived one day.

Tigers were also giving trouble at this time. When there was most noise they made their appearance, and once they carried off two men. The condition of the Siamese troops was pitiable, at night, when I though well clothed and dry, shivered with cold, these poor people lay on the wet ground without any covering; their daily rations were only a few ounces of rice, in addition to whatever they could pick up in the forest, yet there was never a murmur heard or word of complaint. During the night they would straggle into the stockade in twos and threes, looking for something to eat. Sometimes they might be heard chaffing and calling out to one another to return to the Haw, the authors of all their troubles, showing as much indifference as if they had been deer-stalking.

The general, Pan Ra, was not much better off. Had he not been wounded, it is possible he would have taken the stockade with a rush, for he was plucky enough, and I think the men would have followed him, but he was totally incapacitated. The days were sometimes hot, and there was a plague of flies, and as he had no protection from the heat or flies, I gave him my tent. I tried to persuade him to raise the siege and fall back on Chiong Kwang, where he could make fresh arrangements for supplies. I represented to him that the Haw would certainly run away in his absence, and all he would have to do would be to take necessary precautions against their return. This proposal shocked him, for he thought the chance of capturing the Haw should not be lost. I told him, as things were, there was no possibility of capturing them, they could hold out for a year, as they were well stocked with provisions, whereas his unhappy followers had nothing to eat. He remained obstinate, and expressed his determination to hang on. There was great danger of a body of Haw coming from Sob Et, in which case his men would have certainly been dispersed

with unfortunate results to themselves I proposed that he should allow me to go to Muang Lu by way of Sawa and Sob Et, and allow P'ia Pichai to accompany me as he was the commissioner of Luang Prabang, and those places were under his jurisdiction This was agreed to, and after being twenty days at Tung Chieng Kan we departed, carrying with us all the wounded of P'ia Pichai's stockade Arriving at Ban Le, we halted for a few days to see what could be done for the wounded, and arranged to send them on to Luang Prabang Rossmassen fell ill, so he accompanied the sick and wounded We kept about fifteen marines with us as an escort

BUDDHA

CHAPTER XIX.

MARCH TO TLNG THE KA CH

WE halted for some days at a large settlement of Meo, between whom and the Haw of Tung Chieng Kam there was a close connection There were upwards of 200 representative men of the Ka Che tribes These tribes had been goaded into revolt some years before, when more than half of them were killed or died from starvation They are usually called Ka Che (meaning slaves), and their homes are on the slopes of the mountains all over the Luang Prabang division. They live in communities, and the boundaries of village lands are religiously respected, being always marked where the paths cross Clearings are carried on, and from year to year different places are brought under cultivation. If a village has not sufficient land to allow of a seven years' rotation, some of the community are compelled to seek other mountain slopes

The tribes are usually Kamu, Kame, Pai, Lamet, Bit, and Hok. At one time they were associated only with Luang Prabang, but after the rebellion upwards of 20,000 settled in the Nan division The teak trade of Siam is carried on chiefly by their means, as they are sturdy and hard-working foresters, content with very small remuneration. They are all spirit-worshippers, worship consisting in partaking of a liberal feast in the spirit house Running down the middle of this house is a long fireplace, over which great joints of buffalo-meat are roasted, and these are washed down with copious draughts of home-made spirit. The Ka Che have no written language A legend relates that in days gone by the King of the Kas visited Luang Prabang, and there found houses made of brick and mortar On inquiring how the lime was produced, he was informed that it was made from the rocks. Returning to his people, he suggested that they should also try to make lime. The

difficulty was how to break the lime rocks, the king told them to use their knives, but the only result of this was that all the knives were destroyed. Thereupon the people became enraged, and slew their king, but they immediately repented, for he was the only one who knew the Ka writing. That the knowledge might not be lost, they proposed cooking and eating the king; but this method of diffusing useful information among the people was of no avail, and the art of writing was lost for ever. They then had recourse to

MEO VILLAGE.

sending despatches on notched sticks. The number of the notches indicated the dignity of the sender of the message, and if it was urgent a chilli and feather were attached, meaning that the message must be carried out hotly and swiftly.

The spirit of the King of the Kas resides at Luang Prabang, and until very recently was presented with daily sacrifice. If a man falls ill, recourse is had to the use of sticks; the sticks are broken, and the manner of breaking indicates whether a pig, dog, or fowl should be sacrificed to propitiate the evil spirit.

A story [illegible] of Kas[illegible] Kra Bi, w[illegible] invited [illegible] who [illegible] feast was given [illegible] elephant, [illegible] sat down to the [illegible] portion of meat [illegible]

A MANGRAWN.

you to eat the whole of the [illegible] have an animal which, having [illegible] than an elephant and you give [illegible] are treacherous [illegible] with you.'

On arriving at Mung Saw, we found [illegible] settled there about six months, and which [illegible] supplies, without making the slightest [illegible] Mung Saw is important, having been one of the [illegible] between the

different bands of Haw[illegible]s, w[illegible] [illegible] among themselves. He to the Black Flags of China [illegible] Tang Ching Kung.

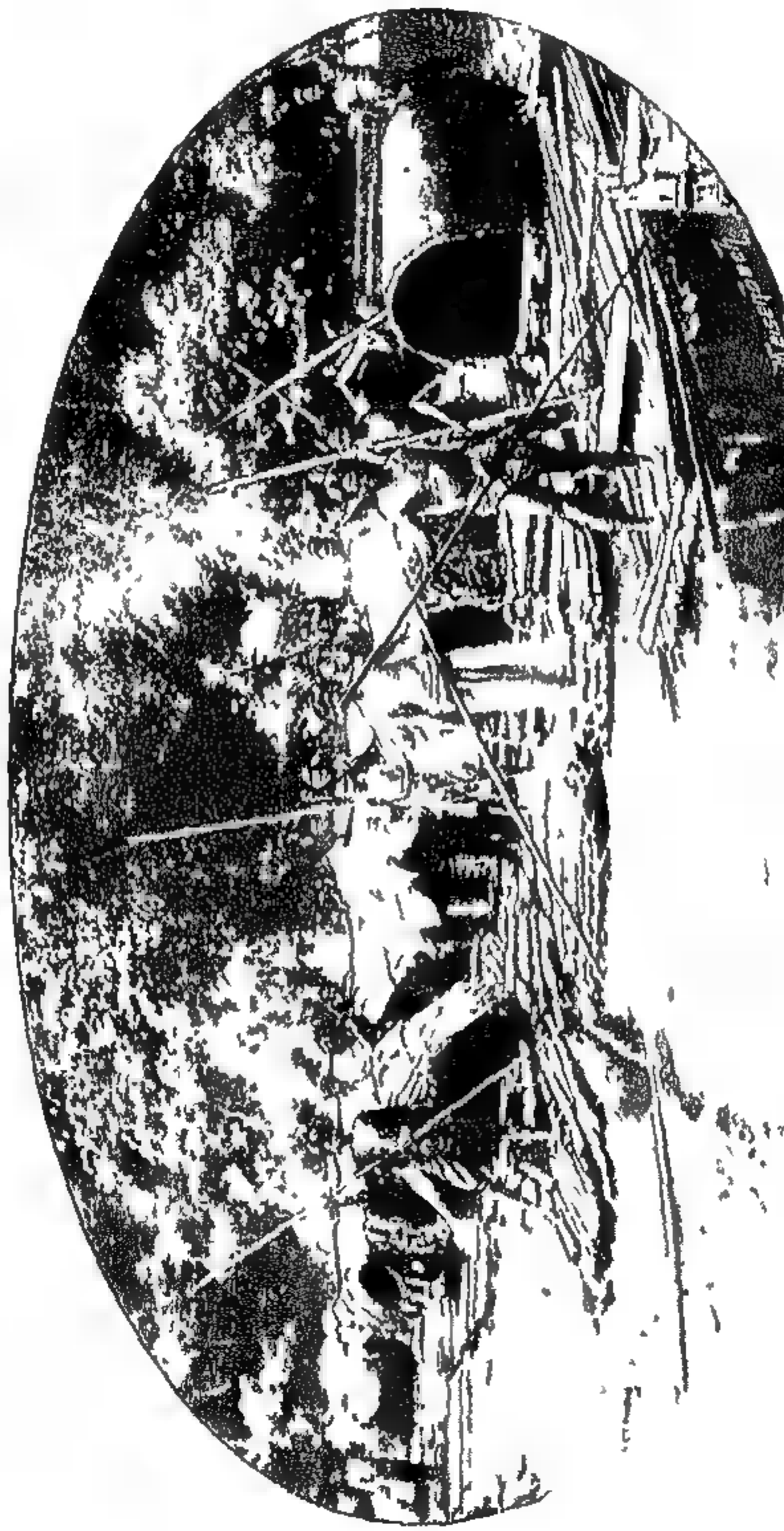
There were two routes to Mang La, and we [illegible] through, but it was [illegible] as we wished [illegible] Haw, who were [illegible] same time [illegible] were sent [illegible] son of the Chief of Laung P[illegible] pay him a visit.

Everything seemed in confusion, but [illegible] fore with the general's plans. However, [illegible]

WOMEN BURMAN SAWN.

supplies [illegible] price, and I saw a number [illegible] the right quality. As we started for Ang Sawn or Mang Sa, the Nam Eh, which he had a strong [illegible] examination, and Collins and I determined to go down [illegible] the people told us this would [illegible] often of the impossibility [illegible] for ourselves. The Chinese Rawong, however, [illegible] amused with the notion, and accompanied us, and it was well that he did so. We started all right, but had [illegible] we found the river choked with rocks, over which we had to lift the

rafts. As we proceeded the rocks became more difficult, and we struggled on, until at last we came to a narrow gorge which was full of

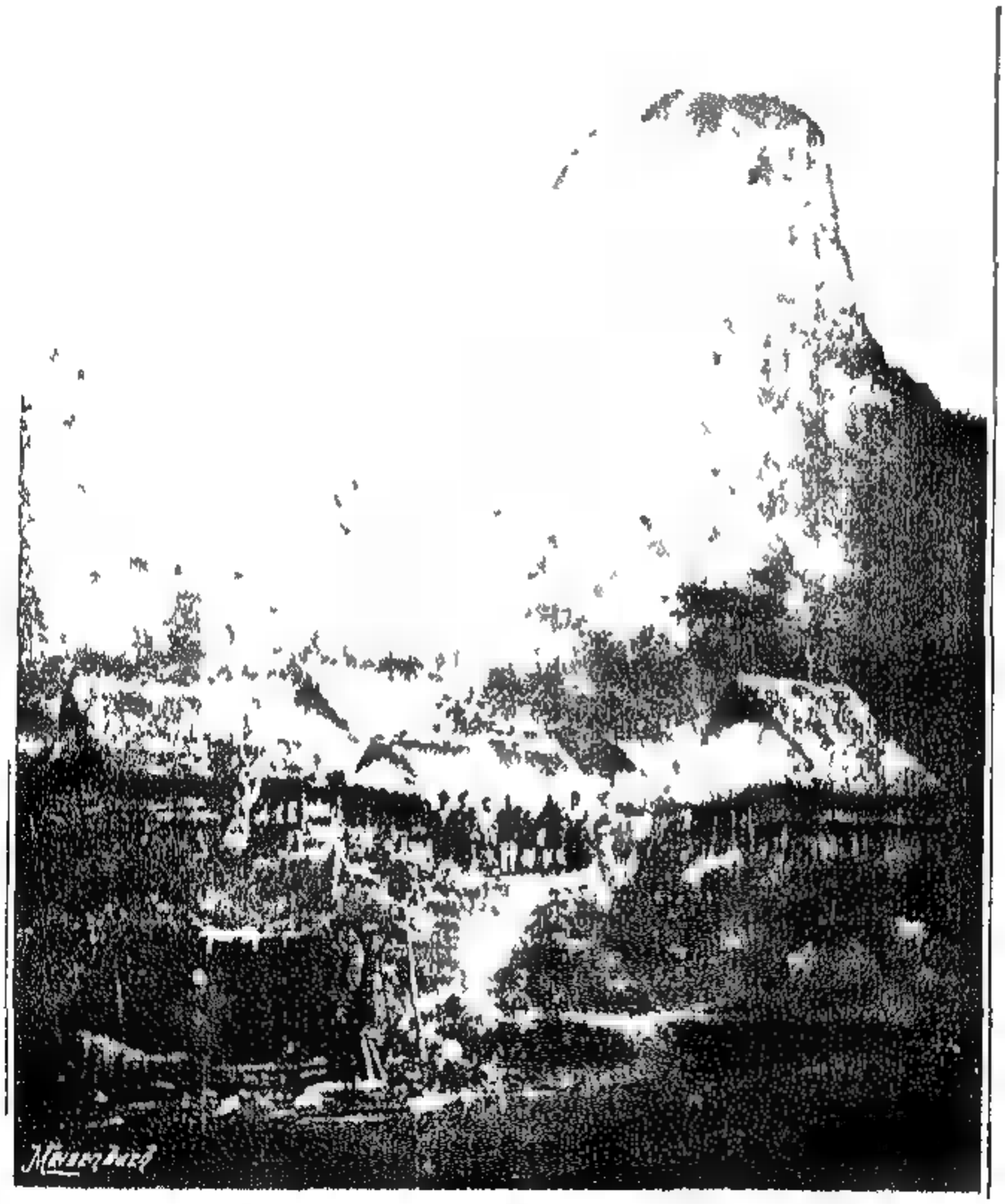


EATING IN THE VILLAGE.

30 feet. To pass this was certainly impossible, and rafts and river had to be abandoned. The day was so far advanced that we could

not reach the camp but [illegible] spent, and by nightfall, footsore and weary, we [illegible] where the Chaos soon had us comfortably located and provided with a good fire.

The next day we caught up the rear of the main [illegible]



VIANG KAO [illegible] UA AN AN [illegible] IA IANG [illegible] K

Kao. Here one of the roads to Muang La [illegible] the men had branched off too, and I suspected that Pa La had connived at their running away. At Muang Ka [illegible] walls and went down the river to Sob Pon. When we had made [illegible] and from there it was reported there was not [illegible] to it the [illegible] This seemed terrible, but I felt convinced [illegible] was a mere [illegible]

P'ra Pichai to prevent our going to Sob Et. The last could not remained, there was not a gram of rice, and we distributed all we ourselves had brought among the men. We watched every boat between Sob Et and Muang Sawn, but there was nothing for it but to return. On the second day, however, we met men with supplies, and it was very evident that their former scarcity had not been the result of accident.

I had a serious talk with P'ra Pichai. I asked him if we were to make an effort to reach Muang Lai or not; if he thought not we would stop at once; but if he thought it advisable to proceed, then there must

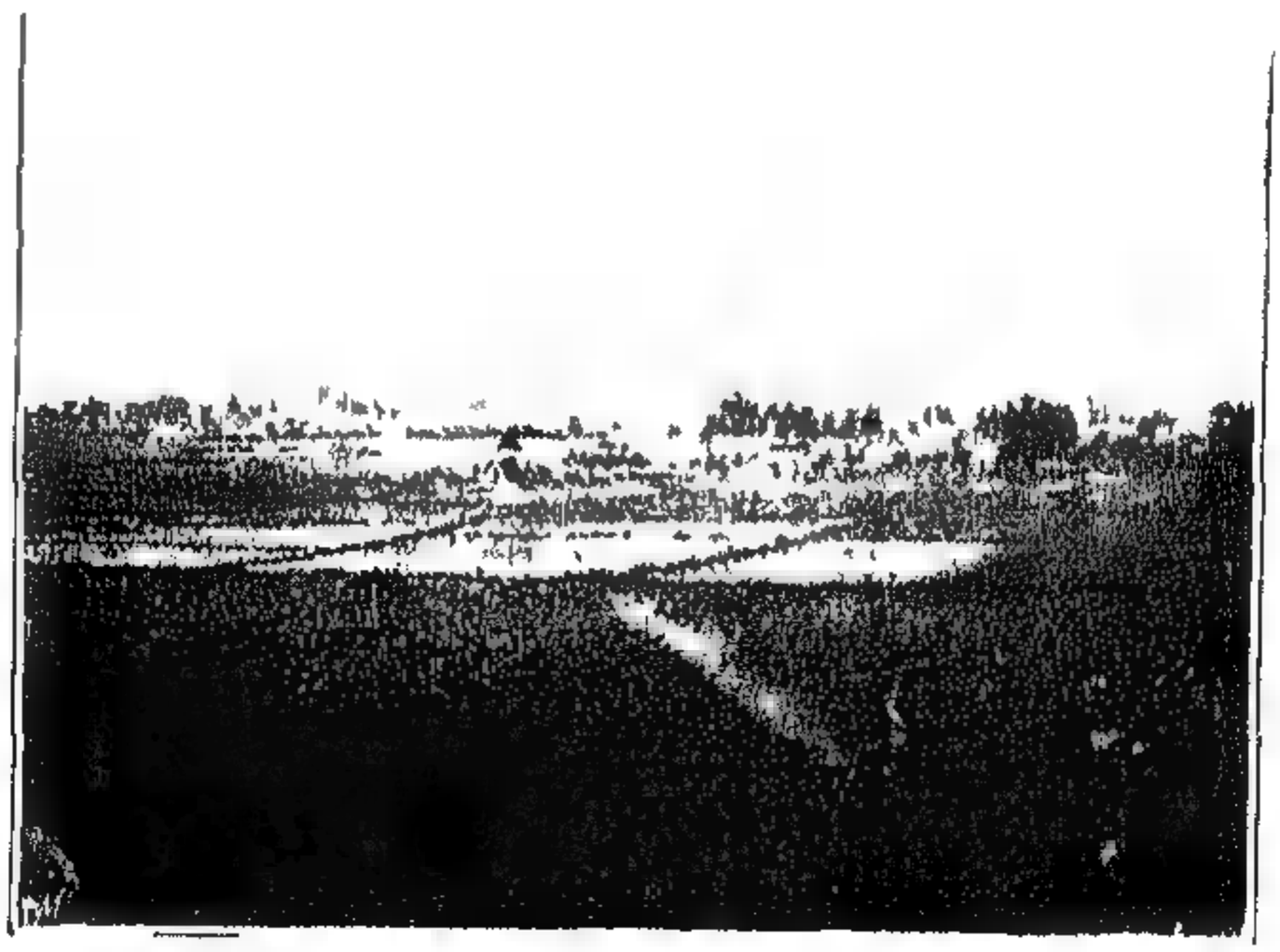
TUB ON THE NAM U

be no more tomfoolery, and we must go straight on, to all of which he agreed. The rainy season had already begun, making the marches very heavy, along paths that had not been used for years and swarmed with leeches. On account of our not running short we had to change our whole programme, and returned to Muang Ngoi, on the Nam U, to ascend it to Sob Et. Collins went up the Nam U as far as the boundary of Luang Prabang at Muang Ahm, and it was arranged we should meet at Luang Prabang not later than June 1. Meanwhile, P'ra Pichai, the Chao, and I went over a very rough path, and reached Teng pretty well played out. With the exception of P'ra Pichai and myself, every one of the party had fever.

CHAPTER XX.

FOLLIES AND PERSONS IN LAOS

MUANG TING is a magnificent plain of upwards of 100 square miles at the head of the Nam Nua, a tributary of the Nam Ou. It has played an important part for ages, and provided a refuge for fugitives against the kings of Anam. About the middle of the plain, on a mound, is an old fortification, Chieng Lo overgrown with jungle. Here in

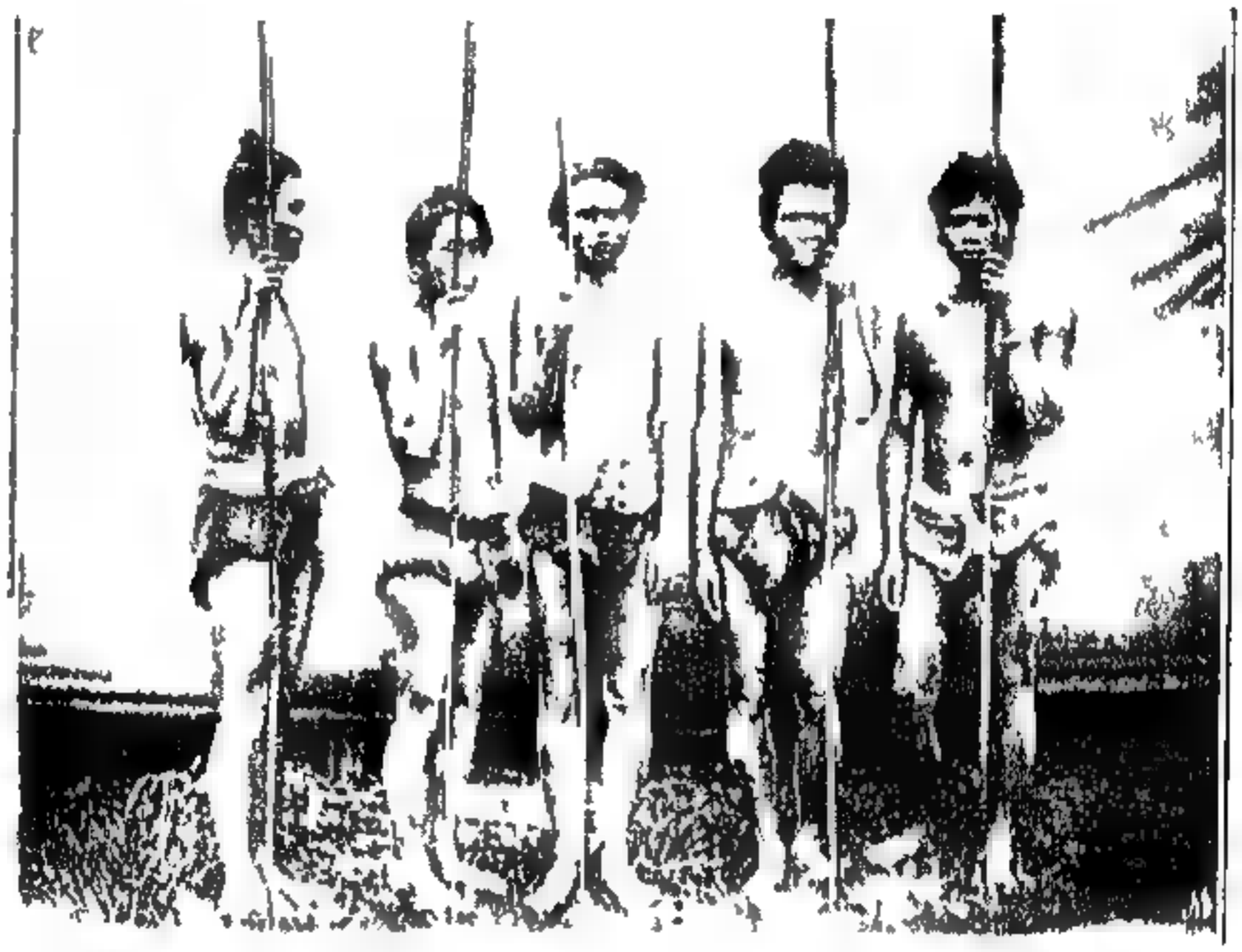


HAN OF MUANG PING

the first appearance of the Haw, under Lawk Chan, one of Lao chiefs (and ancestor of Sibsawng Pana), sent from Luang Prabang, had taken and driven off the robbers, killing their leader, the Haw, however, had returned and built a stockade on a small eminence to the south.

On our arrival we found the Chao Muang at the temple, his condition not being improved by the terrible [illegible]

night. The whole camp, therefore, moved [illegible] village called Nawng Luang, while Pu Pha [illegible] the stockade, which was merely [illegible] the corner about 12 feet high. Pu Ye [illegible] Chao Lai, met us. He [illegible] and I invited them to meet us at the [illegible] Nawng [illegible]. After transacting our business, we [illegible] the men, it was necessary to [illegible] down the Nam Nua. Waiting a few days we [illegible] of recovery, and also lest [illegible] to Lai [illegible] that [illegible] we could [illegible]



[illegible]

visit Mang Lai. He sent down two of his accurate scows, Kam Kui and Kam La with presents of excellent [illegible] for the Chao, the commissioner, and myself. I handed mine over to the Chao.

The Chao of Lai's letter was very satisfactory. Mang [illegible] had always been loyal to Siam, and that he had prevented encroachment on Sibsawng Chu Tai by the Anamite king, who, over since the appearance of the Haw had made efforts in that direction. An active agent for Anam was a man calling himself Kato [illegible], whom Chao Lai had treated as a son, but who had treacherously gone to Anam, had obtained assistance from Tuduk, and had then attacked his benefactor, who called in the assistance of the Black Flags. He

assured that whatever happened we would have [illegible] presence of Kaitong anywhere [illegible] Shewing Gaw's [illegible] He was an old man, and unable to visit us himself [illegible] to represent him. His others [illegible] case of danger, as there [illegible] Nam Tao (Red river) between the [illegible] assured us that if ever we should go to [illegible] he would have much pleasure in welcoming us. These [illegible]

CAM KUI AND KAY [illegible]

I was glad to meet them. On May 2, the Queen's birthday, there was a general gathering of the clans, and the Chaos [illegible] were busy settling about future work while I was making [illegible] tion for the journey to Luang Prabang, which I had not attained reach by June.

In these countries there is a peculiar [illegible] trouble. A distinction is made between [illegible] personal jurisdiction. Thus, if a man [illegible] Nawng Kai's [illegible] Prabang, he paid tax to the Governor of Nawng Kai [illegible]

a Nawng Kaman and to the Luang Prabang chief for [illegible] tax, the amount of which was [illegible] The Nawng Kaman people settled in Luang Prabang [illegible] year to the Governor of Nawng Kaman [illegible] Prabang citizens

A still worse institution was that of [illegible], instituted over territory that belonged to different kingdoms. [illegible] of Lai was the governor of territory, portions of which were [illegible] China Siam and Anam (called Sip Song Pa, or twelve [illegible] directions) This arrangement gave rise to great complications. Lai

BOYGUAN OF KAMAWA

was established in the fifties, when the Chief of Luang Prabang, Chao Luang Seim, sent 1000 men to help in the settlement

The late old Chief of Luang Prabang invested the Chao of Lai with powers for the administration of that portion of Sipsongpanna Tai (twelve provinces of Tai), which lies on the right bank of the Nam Te (Black river), and the Chao was always in trouble through resisting Anamite attempts at encroachment Up to the advent of the Haw all had been peaceful, and Luang Prabang collected the revenues even from the Anamite settlers; for, as the old chief told me, had they not paid the taxes they would not have been allowed to settle When Wieng Chan rebelled there was a period of trouble,

[illegible] the Siamese, following [illegible] difficulties, drove out the Annamites.

Kutong, the enemy of [illegible], was [illegible] way. His father had belonged to [illegible] in the province of Kwang Pungan [illegible] Wang Wang Leng. As a trader [illegible] and was taken into the confidence [illegible] Annam, he had an audience of King Tu Duk [illegible] appointing him Governor of [illegible] proposed by Chao Lau, and spent several years in [illegible]

NORTH CENTRAL VIETNAM

[illegible] force in entrance into the country he had [illegible] He sought assistance from Teng Hung (probably [illegible]) [illegible] ally reached Teng but on the way [illegible] of his [illegible] surrounded by Chao Lau's soldiers and murderously [illegible] He then repaired to Pensui, where he [illegible] consulting the bones of a fowl, [illegible] for the purpose [illegible] that the spirits directed him to [illegible] known to the old chief, who, far from helping him [illegible] his head should be cut off, [illegible] into the Luang Prabang districts and [illegible]

On May 26, with *au revoir* to our new friends, we started [illegible]

but had not gone very [illegible] when we [illegible] transferred ourselves. At a rapid near the mouth of the Nam Nan one of the boats was [illegible] swamped but for the barrels lashed [illegible] troublesome [illegible] of June 1 we reached [illegible] and Rossmussen

BUDDHA

CHAPTER XXI

THE LAW INTERDICTION AND SIAM DAMAGED

Siam was determined on another effort to drive the Haw out. The power was breaking out in all sorts of places. With this intention one expedition was organized under Phra Sutasak Mahit, and one to operate in the country under the jurisdiction of Luang Lot, and another, under Phra Prachak, was sent. Nawng Khai in the history of Siam were such operations, very [illegible] pushing great things for the benefit of the country, and were the exercise of that inflexibility so called [illegible].

Prince Prachak, a brother of the King, had with him a Prussian Deo, who had been at Wolwol, [illegible] the artillery. He was [illegible] of the best fighters and [illegible] Phra Sutasak, [illegible] was also [illegible] possessed, [illegible] friendship and confidence of the King. If these expeditions failed in the slightest details, it was to the failures and [illegible] could be attached.

In the previous year Phra Prachak had [illegible] of Tung Cheng Kam after three months, [illegible] Nawng Kai.

Prince Prachak went to Nawng Kai, and his active [illegible] and pushed on to Tung Cheng Kam but he was surprised to find that the birds had flown. He, however, burnt the stockade, and placed it beyond all possibility of being [illegible].

Phra Sutasak fixed his headquarters at Phang Saw [illegible] he remained during the rainy season, and went through a considerable amount of hardship. Later on the Prince [illegible] the [illegible]. The place of Dr. Noiss was filled by M. Lavio, a man about thirty five years of age, who had formerly [illegible] service [illegible] government of Siam. It was he who had constructed the line of telegraph

from Bangkok to Pratabang. He had already made many surveys in the regions between Siam and Cambodia, and in a subsequent chapter I shall give a graph line through Angkor Thom.

England had made a treaty with Siam appointing a vice consulate at Chieng Mai. There is no British subject within reach of Luang Prabang, though in the whole province there was not a single resident French subject, Portuguese, American, or German. M. Pavie was now proceeding to take up the duties of the vice consul.

As I was to go north and on Pavie's return, it was thought that I might with advantage accompany M. Pavie, and the courteous French representative, Commandant le Kergunadec, arranged that I should do so. I had elected to go by way of Chieng Mai to avoid interfering with the transport arrangements for the party to Luang Prabang, and this route also suited M. Pavie. But in order to be involved in any complications that might arise in the future, had the nature of our connection thoroughly explained. He and I, it was agreed, would travel together as far as his boat, and my canoe could be towed by the same launch, and our companionship should cease when we reached a point beyond which the launch could not go.

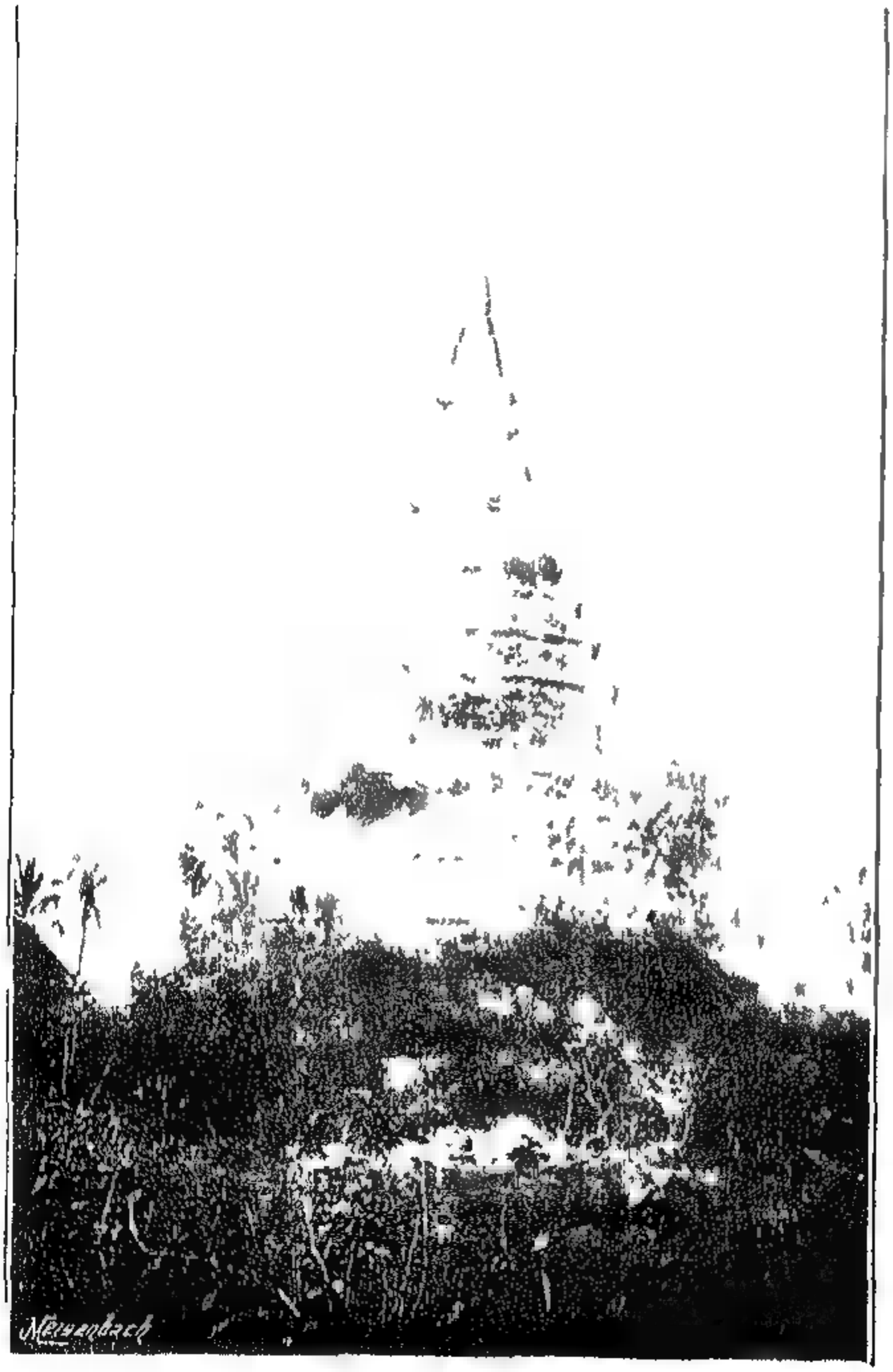
Above Paknam Pho the launch towing us stuck in a sandbank and, being swung by the stream nearly crosswise, my canoe broke, which was lashed close to it. The launch averred that we could be towed no further, and I had to leave M. Pavie, and, according to agreement, now going his own way.

M. Pavie was always courteous and did all in his power to make the journey pleasant; but continued association with him would have led to no good in any direction, and, considering subsequent events, I am thankful that we separated.

I was accompanied by Collins and Lacas du Plessis de Richelieu, and we hurried on to Chieng Mai, thence to Chieng Rai, by land to Luang Prabang, and thence to Muang Teng, which place we reached on December 6.

Phra Surasak had arrived a few days before, and had placed the sons of Chao Lai, who had been sent down to receive him, in close confinement. I felt sure there would be trouble, and wished to remain with Phra Surasak, but he objected to my presence. I then proposed to go to Lai, but he wondered what I could find to do there. Had he consented, I would have asked for the release of the sons of

Can La, [illegible] were appeased, there would [illegible] complications. [illegible] man who, above all other [illegible] hasn't been stretching very hard [illegible]



PAGODA IN [illegible]

had originally lived on the right bank of the Nam Ta; but, influenced by the Chinese and superstitious notions derived from the custom pigs which, when about to litter, swam across the river, he had transferred his home to the right bank

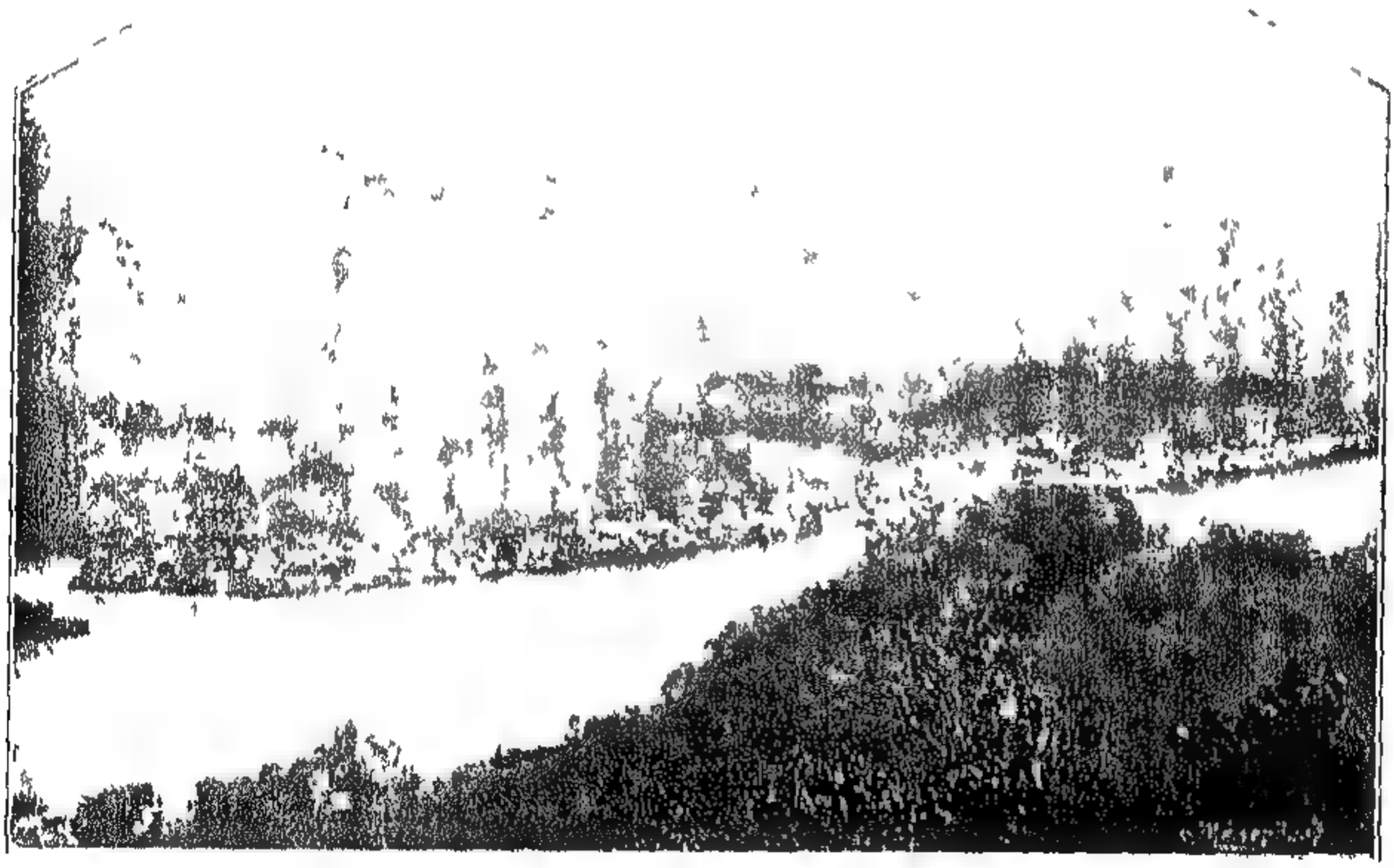
P'ra Suasak was infatuated with the [illegible] to Teng on account of his sons, and at the same [illegible] overtures to the famous Black Flag leader [illegible] feelings of this man towards him seemed very much like those of the fly towards the spider, for he usually put off his [illegible] excuse, alleging at one time that he was keeping [illegible] birthday, at another, that he was detained by worshipping [illegible] of his other grandmother.

My idea had been that I should go to Muang Lai and survey along the boundary of Siam, but my instructions were to place myself under the orders of P'ra Suasak. His directions were that I should go to Sop Et, meet a section of his army there, then follow the boundary of Hua Pan Tang Ha Tang Hok, and eventually go to Nawng Kai. De Richelieu, who had been taken ill, left by boat for Luang Prabang and Nawng Kai, but Collins accompanied me. On my way to Teng, and at Teng, I was subject to severe attacks of ague, but at Muang Ya the attack was so prolonged that I was quite exhausted, and fever came on. Night was made hideous by the howls of [illegible] of the village exorcising the evil spirits from some victims of fever. I fell ill on December 23, and it was not till January [illegible] that I was able to move off again. I then went to Luang Prabang and thence to Bangkok.

M. Pavie had in due time [illegible] Luang Prabang [illegible] moved up the Nam U, but when he had advanced as far as the mouth of the Nam Nua, he met the Lao of Muang Teng in full flight before the Haw, these marauders having been brought down by the eldest son of Chao Lai, who intended with their help to evict [illegible] of his brothers. M. Pavie returned to Luang Prabang, which P'ra Suasak, who was now at Paklai, had denuded of such troops as defence had possessed. The Haw continued their advance down the Nam U and reached Muang Ngoi. There a narrow river-gorge, over a mile long, is commanded by a hill, whose limestone cliffs rise perpendicularly from the water. In the gorge the river is very deep, but the current is imperceptible, and boats descending can make no progress against a head wind. No hostile band anticipating opposition would attempt to force a passage, but the Haw evidently knew the men they were dealing with. They ascended the hill, and, seizing the excellent mountain howitzers, which had been provided for the defence of the position, rolled them over the cliffs into the river.

They then pushed on to Luang Prabang, and took up their quarters at Wat Chiang Tawng. Before their arrival M. Pavie and the Siamese commissioner had left. The Chao Upang had also left, but was recalled by the chief, who was determined to be King of Prabang. One of the chief's sons enrolled some twenty Pavis as a special body-guard for his father.

The Haw now acted in accordance with their usual [illegible]. Beginning at the Wat, where they had chosen their quarters, they



VIEW FROM PRABANG TOWARDS THE ON THE RIVER MEKAWN

extended their murderous work throughout the town. The Chao Upang was put to death, and the old chief was compelled by his sons and Burman guard to go on board a boat, where one of his sons was shot before his eyes. Luang Prabang was fired, and the historic golden statue of Buddha, called "Pra Bang," had already secured by a wily old Lao, who had buried it till it [illegible] it. The old chief met M. Pavie lower down the river, and together they went to Paklai, the chief going on to Bangkok.

During the next dry season the French made a final effort to

subdue the outlying provinces of Penk[illegible] and [illegible] Siamese to co-operate with them. The Siamese [illegible] however, had not left the valley of the Me Nam [illegible] attacked the Black Flags at Lakan [illegible] established themselves at Ma[illegible] Tong where, [illegible] position, they quietly assumed jurisdiction over [illegible] Meanwhile M. Pavie, who had been provided with [illegible] to whose plucky behaviour on one occasion, when [illegible] How, however, his life, had been [illegible] Chu Tai, and ultimately joined the French troops.

A Buddhist

CHAPTER XXII

RAILWAY SURVEYS IN [illegible] LAOS [illegible]

About this time (1887–88) the development of the country by the construction of railways was under serious consideration, and, through Sir Andrew Clarke, a contract for railway surveys was [illegible] to Messrs Punchard and Co, English railway contractors.

Taking part in this interesting work, I accompanied Mr Wilson Gilway, the chief engineer. The line were directed [illegible] to Ayuthia, the former capital, destroyed by the Burmese in 1767. Though nothing remains of the old city but ruins of temples [illegible] pagodas, it is an important and populous place. The Ayuthia line was projected to Korat, and no [illegible] of annual pilgrimage, and thence to Lopburi.

Lopburi has many interesting works, but only [illegible] Constantine Phaulkon, who rose to the position of Prime Minister to Siam in the year 1687.

The town is [illegible] dozens for cattle-[illegible] Nam Kwang, the whole district being [illegible] cattle. From Lopburi the proposed line was to run over the plains of the Me Nam to Utaradit, and [illegible] was only in this last portion of the route that any difficulty was encountered.

Pro is a walled town about half a mile square. Within it, was under Nan, but has now a separate jurisdiction under its own chiefs. The town stands on the left bank of the Me Yom, which is about 1000 yards broad. Lower down an obstruction in the channel banks up the water, and during heavy rains the town is exposed to floods, which account for the dilapidated condition in which [illegible] the walls.

Almost annually, during March and April, the [illegible]

flow with such perpetual regularity as to suggest something more than accident. To the east of the town lot [illegible] themselves, and have introduced gambling, opium smoking, drinking, and every vice. As a consequence crime is [illegible]. During my visit a Nyio pedhi was robbed and murdered, the very grandson of the governor, and not the slightest trouble was taken to discover the criminal.

The administration of justice seemed primitive. A [illegible] criminal had escaped, and the servants of the [illegible] were despatched to entice him back, ostensibly to give evidence in a case. Suspecting no danger, the man returned and while under examination in the court he was deliberately killed by a blow on the head with a hammer used for marking timber.

At Pie I met a very interesting Haw trader named Sulimun Maindim (Chinese name, Ma Yuch Pheng). He had been a trader over the Lao country for fifteen years, had visited Mecca, Penang, Calcutta, Rangun, and several times to Maulmain. He was accompanied by Suliman Malai whose Chinese name was Ma Chi Wu and who had never travelled before. He was then intending to go to Bangkok, and thence to Mecca, returning by Maulmein. Another companion was named Yusuf (Chinese name Nahing Ping). They were of the Wahabi sect of Mahomedans, and refrained smoking, as I ascertained when, in reply to the polite invitation to *betel* (sic) in his small tent, I offered him a cigar, which he declined on the ground that his religion forbade the use of tobacco.

The three traders claimed to be Arabs, but, in accordance with Chinese requirements, each had a Chinese name besides his Mahomedan one. They had about 180 mules, carrying chiefly opium and some wax. As each mule had 133 lbs. of load, there must have been at least 13,000 lbs. of opium, but to dispose of this was now their difficulty. The Chinese opium-farmer was waiting for them at Utaradit, and they had the alternative of taking it back or agreeing to the opium-farmer's terms. But Suliman was already planning another enterprise, and that was nothing less than a bold dash at Maulmein. As he had been there "many times," he possibly knew of a way of persuading the official to pass his goods.

There were about fifty men, all looking well, except Suliman Maliki, who, not having travelled before, was suffering from fever. I gave him some of Dr. Cowan's "fever cure," made by the doctor

himself an excellent remedy, which I never saw out of it, but which I have reason to know is not now made as carefully as by the creator. The wages of the muleteers, men by whom were two by 'Kalas,' varied from four to eight rupees a month. The stations they followed was: Wu Nai Sing, which is called ko, to Sul Ing, Chang to Tali, eight days; Tali to Pueih, five days (must be four days at least), Pueih to Smo, two days, Smo to Chang Hung (Sunso "Rung"), six days; Chang Hung to Mung Sing to days; Mung Sing to Mung Lem, six days, Mung Lem to Chong Son, four days.

They were intelligent men, but it was impossible to get them to mark the route on the ground. They seemed to have no idea of direction. In this they were much inferior to the Lao, almost any of whom can, with a stick, trace on the ground the route followed, hitting off with remarkable correctness the direction and distances. One could judge from the way in which the shoes of the traders' mules were worn they had come a very rough road indeed.

Those men wander about disposing of their Chinese products, opium, wax, iron dishes, non in the rough felts, and walnuts. They eventually find their way to Mulmein, where they secure Manchester calicoes and prints. These they exchange on the new journey for the raw cotton and raw silk with which their mules are laden when leaving Chang Hung. Raw silk was selling at 25 rupees for 33 lbs.

The proposed railway route followed the bridle track to Nakawn Lampun, commonly called Lakawn. This is a walled city divided into two parts by the Mi Wang. It was by far the city that Chang Mai and Lampun were to form. It is a typical hunting-ground for Chinese, who have been allowed to collect the revenues, and oppress the inhabitants. During seasons of drought the people, having lost the knowledge of the irrigation channels, suffer all the misery of famine. From Lakawn a road led to Lampun, a walled city on the Nam Kwang, rectangular in shape 3 miles in circumference. Towns and pagodas are numerous and there is a large hanging gong, about 3 feet in diameter and 4 inches thick, bearing an inscription. The old chief had made many miles of roadway in the province by simply heaping up the clay, which was very stiff. In Lampun the people were left very much to themselves. In the evenings it was common to hear young men serenading, with sweet-toned guitars, called *puas*, instruments

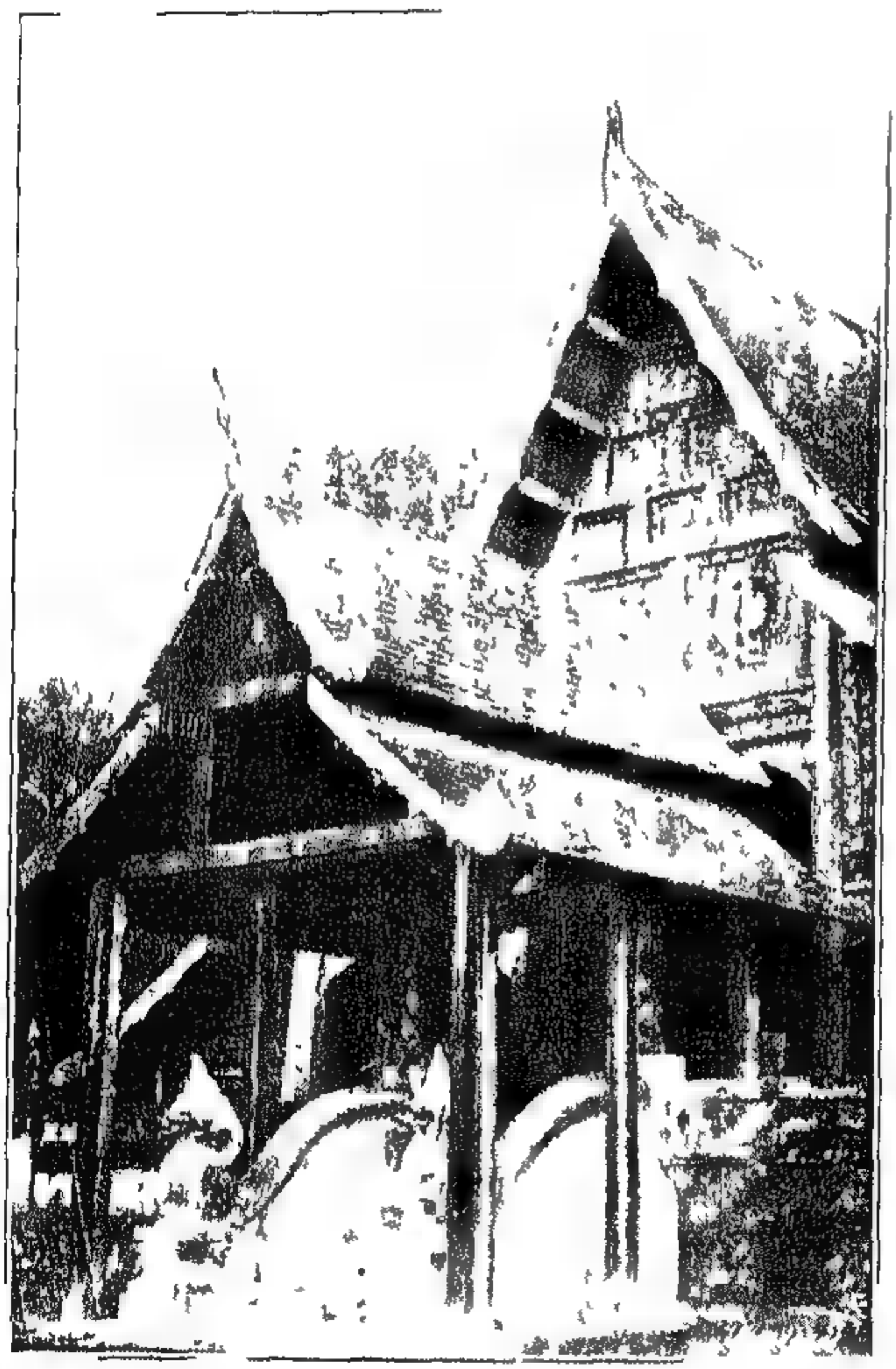
consisting of four strings stretched along a bamboo, which was attached to the polished half of a cocoa-nut shell. When the guitar was played, the cocoa-nut portion was placed on the naked body; otherwise the notes were less pleasing.

From Lampun to Chieng Mai, a distance of 27 miles, the country is perfectly flat. Chieng Mai, the capital town of the Lao Puang Dam, stands at an elevation of 1,000 feet above the sea-level. It is a mile square, and is surrounded by a moat and high walls with five

LAO WOMAN OF CHIEN MAI

principal gateways. From the north it is connected with a semicircular earthwork, with an irregular outline as high as the city wall, sweeping round to the south-west corner, its greatest distance from the inner wall being about half a mile. This wall, which has gates corresponding to the city gates, was built by the Siamese when, under King Naiai, they took the city by storm in 1[illegible]. Chieng Mai is laid out in streets, and the temples are numerous and handsome. There is a daily market, managed almost entirely by women, who do all the

buying and selling, and, as far as I know, the largest assembly of races of people congregate there. The gathering must have contained not less than 3000 people, and not a single place [illegible]



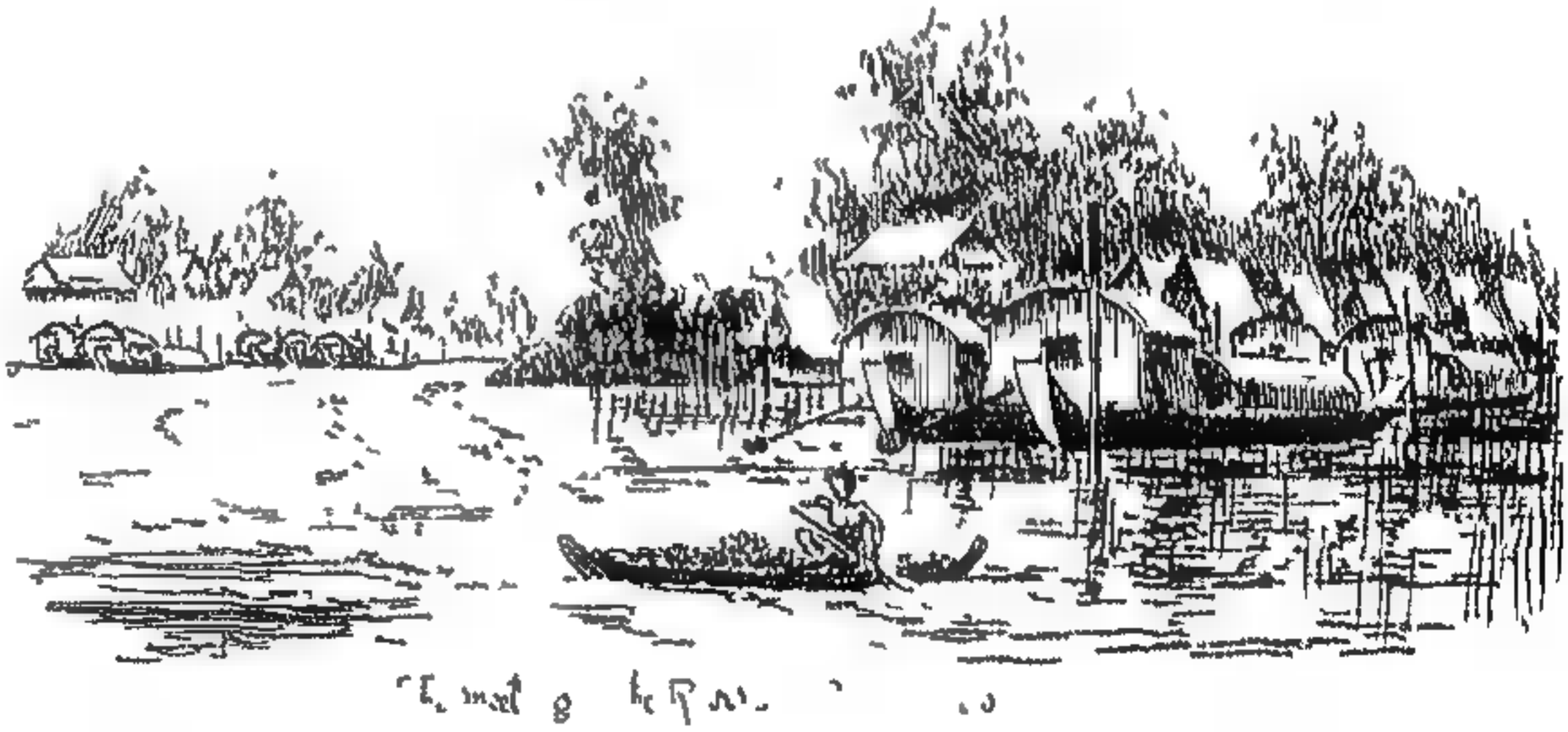
[illegible]

far as I could see, any necessity for [illegible] was no unusual thing to see an elephant stalking down the [illegible] amidst [illegible] Yang (Karens), Nyos (Shans from the Salween), Kons (from [illegible] Tung), Kuan (from across the Nam Kwang) [illegible]

distant Silsawig, Chu Tu, and Haw [illegible] on Ye[illegible]. Good order and the best humour prevailed among the people, and the scene was very interesting.

Leaving the Chieng Mai plain, the route ascended a mountain, a formidable obstacle to railway construction, and passed over a height of about 2400 feet above sea-level. It then descended to some hot springs on the Me Lao, and thence to Wieng Pa Pao, which was established about 1855, when the Siamese army fell back from Chieng Tung. Thence the route went to Chieng Rai, and terminated at Chieng Sen on the Nam Kawng.

The whole of these railway surveys were completed without an accident. Unfortunately shortly before the time fixed for his departure, the chief engineer, Mr. Galway, went down the Gulf of Siam for a trip, and was drowned.



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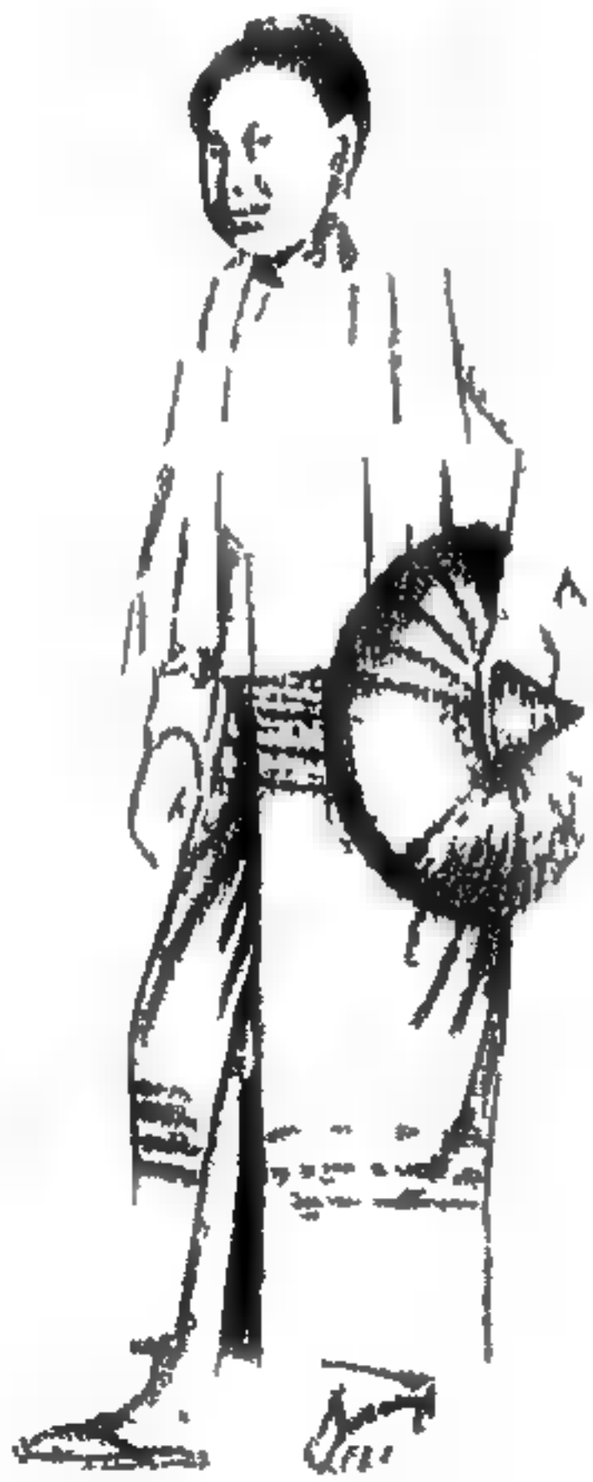
CHAPTER XXI.

FRONTIER DELIMITATION, 1890

I now took up survey work on the north west for the determination of the boundary between Burma and Siam. My position, however, was a painful one, for nine years previous service had rendered



SHAN WOMAN

from suspicions of acting in concert with the English authorities against Siamese interests. As soon as the portion of work allotted to me was completed I retired, and I only recently [illegible] these [illegible]

here because they led to my being appointed to undertake a preliminary examination of the forests of Siam, an important and interesting task. Amidst the difficulties respecting the management of my survey there was one element of assistance, a young Siamese officer referred to as Phra Sirsdi, who from first to last, behaved towards me in a most loyal manner, to my personal profit. The well-merited promotion and success which later on subsequently gained were very gratifying to me.

Associated with me in my new task were several Siamese gentlemen, some of whom had already been my companions for several years, and on December 1, 1890, we embarked on a small stern wheel steamer belonging to Dr. Cheek, an enterprising American who had spent many years in Siam. Steaming along the Me Nam, we first of all visited Bung-Ka-lin, where the capital then was, and took leave of the king. Up-stream we had a easy passage, owing to a few days' rain, the level of the river had been raised from 2 feet, and we were able to proceed as far as Nakawn Sawan, which we reached on the fourth day. In the dry season steamers can go as far as Raheng, but in the dry season they cannot reach Nakawn Sawan.

At Pakram Pow we divided into two parties. One party, under Phra Sirsdi, who had developed into an excellent explorer, travelling in difficulty, and taking the greatest interest in the work, to which he had rendered loyal and substantial assistance. It was arranged that Phra Sirsdi should explore as much of the unexplored country as he could and then meet me at Muang Pan. An approximate calculation was the probable number of days which we should encounter on the part of local levels. Many of the sections were unfavourable to our investigations, and, as without the heavy co-operation proper facilities for transport could not be secured, it was necessary to make arrangements as smooth as possible. I therefore set out for Chieng Mai, where the chief official of the north had his headquarters, in order to arrange with him for the extension of our work. The boat in which I travelled was small, but rapid progress was impossible. The river is wide, with a steep fall, but its channel is constantly being obstructed with sand, through which, in the dry season, passages have to be dug for boats. Often there is not enough water to float the logs of teak which are transported by means of the river, and they are then dragged along by elephants.

We passed one place where a desperate attempt was being made to drag or shoot down, some 200 logs down to Pakanam Po, about [illegible] distant.

Further up we had a view of Kampeng Pet (Diamond Walls) at one time an important city. There still existed [illegible] temples built of squared slabs of laterite, abundant [illegible] and there were many fortifications in ruins. Explorations in the district would disclose many facts of great interest in connection with history of Siam.* Muang Tak (Raheng), the most important town on the Me Ping between Chiang Mai and Paknam Po, is growing in size and importance every year. The town is on the left bank of the river which here is upwards of 2000 feet in width. The governor's house is of brick and mortar, but the usual wooden houses and grass sheds on raised platforms stretch for upwards of [illegible] miles, straggling along the bank, interspersed here and there with brick and mortar temples. There are about 20,000 inhabitants in the district, and, as is the custom, the bulk of the inhabitants live near the governor. In other parts of the district the villages, some of which consist of only two or three houses—are poorly built. At one time Raheng formed a portion of the Chieng Mai district, but it was given as a dowry with a Chieng Mai princess when she married a subordinate prince from whom it passed under the direct control of Bangkok. There is not much rice cultivation about Raheng. The fields for supplying the town are on the right bank of the river, which is here within a few days' journey of Maulmein. Many Burmese pedlers go up-river over Siam travelling to Sukota, Pitsanulok, and Pelat, on the Nan river, and thence to the valley of the Me Kawng to Muang Palang, Chieng Kan, Nawng Kai. They positively swarm over the valley of the Me Kawng and are met everywhere, selling to the natives [illegible] buttons with the Queen's head stamped on them, knives, matches, needles, and countless other things. With the proceeds of the sales they buy an elephant, raw silk, or gamboge, and with these they take back to Burma. There is an excellent path to Chieng Mai through Tern and Lai, which elephants can follow, arriving there in nine marches. The telegraph line runs along the path.

The governor, an old friend of mine, was absent on my arrival but the second governor was there. A keen explorer himself, he has

* A very ancient statue of first class Naga of Siam was sent to Paris from Kampeng Pet, but is now in the Museum in Bangkok.

always been interested in our work, and gave great assistance to us. We were delayed a few days changing boats, and engaged a crowd of Lao, who are excellent punters, or *polers*. The poles used were of strong bamboo, tipped with an iron point, about an inch long, which enabled a better hold to be obtained on the bank, tree or rock. Walking towards the prow along the narrow strip of the boat, the "poler" throws forward the pole. As soon as it touches the bottom he turns, and, stooping low, presses with his shoulder against the end of the pole, moving towards the stern as the boat advances. There are usually three polers, who follow one another in succession, and keep the boat constantly in motion.

We soon resumed our journey, and on the day we started noticed a curious sign of the times, the desperate attempt of a full-sized billiard-table to Chieng Mai. After passing broad reaches of sand where hundreds of teak logs were lying high and dry, we came to the largest tributary of the Me Ping, the Nam Wang, on which are the towns of Wang, Lakawn, and Tern, each the centre of an active teak trade. At Ban Na we took in a supply of ropes, and made preparations for ascending the rapids. Here the mountains begin to close on the river, which narrows, and the scenery every day becomes more beautiful. We found a number of bullocks crossing the river, and having then was by a very difficult route to Maulmein. This suggested the question whether, even ten years ago, the people of the country were not more actively engaged in trade than now. Trade is now in the hands of Europeans, Chinese, and Burmese, but seems to have passed away from people of the country.

Meanwhile, we entered on the first of a series of rapids, and the boatmen, surprised at the additional energy required, plunged into the water, and with a good deal of noise got us over it. The rapids followed one another pretty frequently, there being thirty-three within a distance of about 50 miles. None of them was dangerous, and beyond the delay occasioned they caused no inconvenience. There is a legend that a King sent a party of men from a town near the present Muang Lai, in haste to reach the new ruined temple on the bank of the Me Ping, constructed a raft and actually shot over the precipice on the left bank of the river.

There seems little doubt that the ruined temple formerly belonged to the Lawas, a race that once occupied these hills, but is now almost extinct, the few survivors being found in the country to the west,

engaged in smelting iron. Not far from the river there are some abandoned rice-fields, where the spectator may get a shot at a fowl, or, if not careful, at an old woman, instead of the angle of a gun. Such an unfortunate error happened not long before our visit, but the old dame was not much the worse for it.

Attempts have at various times been made by the people of Chieng Mai to settle in this region, but on each occasion the settlers have been "decoited." The decoits, we were told, still give trouble and even commit murder at times; but there cannot be much danger, for I have seen men, solitary and unprotected, descending the river, without fear of molestation, on bamboo rafts. Europeans have never been attacked, though every year taking hundreds of thousands of rupees up the river in boats.

Below Ban Mukda the rapids cease, and the plain of Chieng Mai begins. Tradition says this fertile tract, about 60 miles long and 5 miles broad, was at one time the bottom of a lake; now every acre that it contains is under rice cultivation, with a most elaborate system of irrigation. Between Chieng Mai and the neighbouring province of Lampun the boundaries, if settled, are not easily identified. On a small hill we observed a *graceful pagoda*, called *Doi Kung*, which used to be associated with state ceremonies of the Chief of Chieng Mai when he passed this way. Such visits now seldom occur, and the pagoda is sadly neglected. The historical records of the province are entrusted to the spirits, and thousands of palm-leaf documents, tipped with gold, in teak-wood boxes, are under the trees on the bank of the river. This part of our journey was of little interest, as we dragged our way along in the boat.

M. Hawt, the end of the land route from Bangkok, was the most important point we passed. There are a number of Kamus with the beautiful metal drums, which are always adorned around them with figures of frogs, and from this circumstance are called Kawng Kop ("frog drums"). The instruments in the local Kare country and in Siam are used only in royal ceremonies, and are called Klawng Maharatuk. After years of toil the great ambition of the Kamus is to possess these drums and take them to their homes in the Laung Prabang district.

At the mouth of the Nam Kan there was a rather numerous village of lepers, who were allowed without restriction, to wander over the country, and even to frequent the markets of Chieng Mai

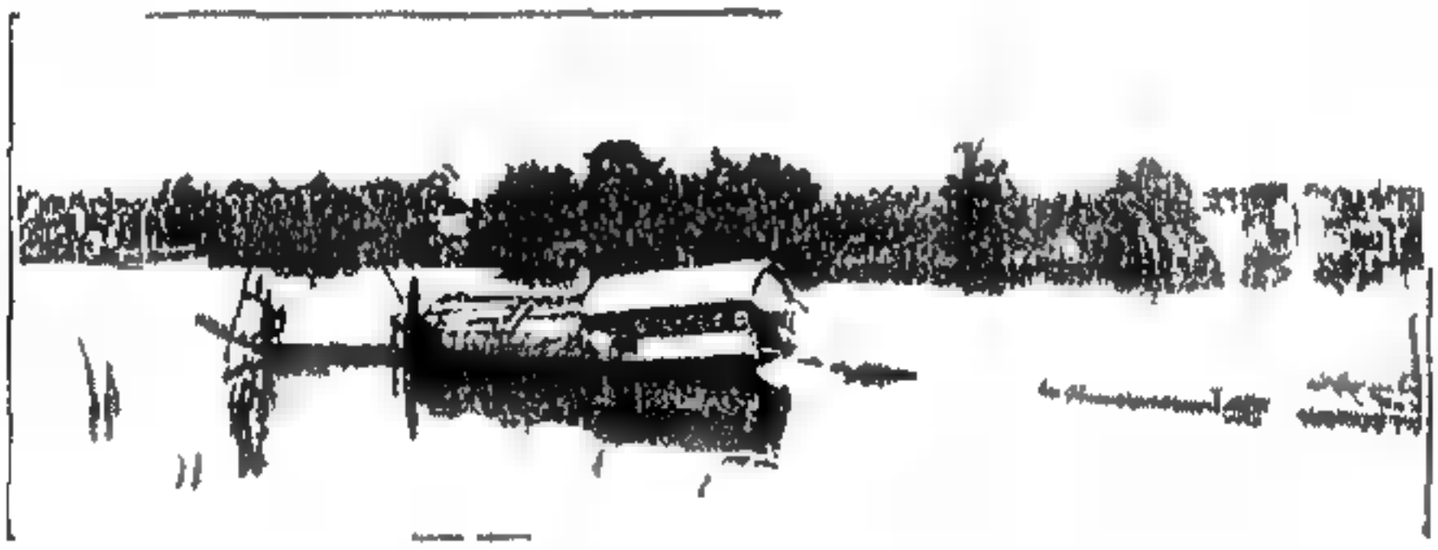
At this spot we obtained a very [illegible] view of the country [illegible] west was Doi Tarea, [illegible] 7000 ft, the highest peak in the Chieng Mai province, and is one of the [illegible] gigantic [illegible] in the highest mountains in Siam. From the [illegible] gigantic [illegible] of Doi Suteb, 8 miles from Chieng Mai, stood boldly out, we could see [illegible] halfway up the mountain. We [illegible] Chieng Mai, we were lost in the hundreds of boats and [illegible] ships [illegible] swarming on the river.

[illegible] 8

CHAPTER XXV.

CHIENG MAI TO MUANG LANG.

THE town of Chieng Mai had a busy and prosperous appearance, and its modern improvements showed the influence of Western civilization. The river was spanned by a substantial teak-wood bridge erected by the late Dr Cheek who had also built a handsome teak-wood church, with a tower, the centre of the Presbyterian mission. The steam saw mill which had been set up by the same enterprising



PONY VAN

American, was in active operation, with Kamu workmen, and substantial houses were rising all round. There was a residence of the English consul, houses and schools for missionaries, and a noteworthy structure, a fine billiard-pavilion. The pathways were excellent, and the water supply was good. The town supply was brought a distance of 8 miles in open channels from Doi Suep but there were also numerous wells, and a spring of very pure water had been struck less than 10 feet below the surface. In the neighbourhood is a large swamp which during the rains has the appearance of a lake, but which in the dry season affords an excellent clay for the making of bricks. To the north is the site of the ancient Muang Tuman, on the downfall of which the present city came into

existence. On the west, about 2 miles distant, [illegible] is a small town.

The summit of Doi Sutep is 5[illegible]0 feet above the sea-level, and the pagoda, standing at an elevation of 5[illegible]0 feet, was formerly a place of pilgrimage once a year. The place was visited by Europeans, but to their intrusion old ceremonies were unsuited, and the priest who had acted as their guides were punished. At the spot there is a plentiful supply of water, and in the neighbourhood the missionaries erected a sanatorium. The site chosen was of sufficiently high, as the malarial region rises to an elevation of [illegible] feet, and the building was left to be demolished by wild elephants. The hill, adorned with oak trees, possesses many sites admirably adapted for dwelling houses, and on the western slopes there are extensive gardens of tea (*mieng*).

This plant is exactly the same as the Assam tea plant, but as the use made of it is different, it is treated differently. There are on the mountains in different places large quantities of tea growing wild. The cultivated plant is grown at regular intervals of about 6 feet, no pruning is resorted to, and the plants are allowed, as the Assam planter says, "to run to seed." The life of a plant is about twelve years. The soft leaves some of them 2 inches long, are preferred to the young tips, and are plucked four times a year: Mieng Hua Pi, about July, Mieng Klang about September, Mieng Sawi, about November, Mieng Mai, about January. The leaves are steamed in precisely the same manner as the glutinous rice which forms the daily food of the people. The narrow end of a closely woven basket, shaped like a truncated cone, is tied into the neck of an earthen pot, three quarters filled with water. A sieve is fastened into the bottom of the basket in which the leaves are placed. When well steamed, the leaves are rolled tight into bundles, and buried. Salt is sprinkled over the leaves, and the whole rolled up into a hard ball about the size of a walnut. This is put into the mouth, and sucked all day. The people find it a great stimulant, and by its use are enabled to go without food for long periods. Large quantities of *mieng* are consumed, bullocks, and even elephants, being often laden with nothing else. It is regarded as a great luxury by the Lao princes, among whom it takes as important a place as the betel leaf and areca palm nut.

Chao P'ia Kralahom, who as Phra Mahatep had been in Chiang

Mai some twelve years before, when still Chieng Sen, was the special commissioner sent to adjust the troubles brought about by the so-called rebellion of the previous year. He was very conservative

WAT SING, LAMPHUN MAI

and polite, fond of talking philosophy, and I observed the effect produced on the listeners.

My old enemy, fever, seized me, and it did not relive my energy as I jogged on all day along a very [illegible] road to Mae [illegible]

The road was not particularly interesting until we reached Chieng Dao, an irregularly shaped village, surrounded by a very picturesque The peak of Chieng Dao stands boldly up 7 000 feet above sea level This is a very imposing limestone rock, springing almost perpendicularly to a height of 6000 feet above the plain It is visible from Chieng Mai, and the people will not believe that any higher hill exists, though from a point a couple of miles below Chieng Mai at the ford, Doi Intanon, rising 8450 feet above sea-level is plainly visible

In the matter of superstition, the inhabitants of Chieng Dao are unfortunate beyond most of their fellow-countrymen They themselves accept the current belief in evil spirits, and they are regarded by their neighbours as associated with spirits in such a manner as to be dangerous They are known as Pi Pawb, or spirit-people, and even their own headman, a minor prince from Chieng Mai, when obliged to hold official intercourse with them, resorts to prayer to charm away the malevolence of the spirits The prevalent superstition has been turned to account by an astute legislator of their own, for, according to the law of the district every person in whom evil spirit influences are known to preside must quit the village, and take up his abode in one of the places set apart for such Thus settlements are located in the borderlands, where there is a turbulent population, and the costly police which would otherwise be required is thus rendered unnecessary. When any one is seized with illness it is supposed that a spirit, seeing its intervals from other spirit people, preys on his vitals The sufferer, being supposed to know whence the spirit emanates, is plied with questions. If he is delirious, his answers are the more satisfactory, and whatever person he names is at once held to be convicted His house is burned, and he himself, driven from the village, is glad to take refuge in one of the numerous settlements of the Pi Pawb

Leaving Chieng Dao, I met four old ladies on a pilgrimage to Tap Tao ("Turtle Cave") The youngest was very sixty. Dressed in white, in a habit like a nun's, they had walked from Lakawn, and had been to Prabat Si Roi They told me they would not be sorry if they died when making their pilgrimage Lightening their burdens, I undertook the care of some few things they were carrying and promised to have them safely delivered at the cave The fact of these old ladies travelling about the country, and camping out, sometimes

in the jungle far from any village, shows that tigers regularly hold tracks are rec, at least, from the danger of wild animals.

Approaching the main watershed we observe numerous limestone rocks, rising from 100 to 200 feet above the surface. Such rocks are plentiful all over Northern Siam. The [illegible] look formidable enough, but always have easy passages. Towards which is low, with rough approach, has given [illegible] cropping out all over and beyond it, on the side of the [illegible] large cavern, the abode of some terrible spirit. [illegible] themselves by tumbling rocks into the cavern, and listening to the rumbling echoes far down in the darkness. The descent, which begins at the cavern, is not a difficult one to the plain of Muang Fang and Tam Tap Tao, where there is a very large swamp. When we arrived, preparations were being made to receive the Chief of Chieng Mai who was about to come on pilgrimage. But it seems a misuse of the word "pilgrimage" to apply it to a procession of 120 elephants, carrying pilgrims who live not more austerely than they would at home. In addition to the excessive comfortable journey, the visitors, on such occasions, have the excitement of the chase; for they join in a general hunt in that [illegible] country where game is plentiful. [illegible] property, and entered the sacred cave, which was far [illegible]. It contained numerous statues of Buddha. [illegible] lead to all sorts of fabulous places.

On February 7 we reached Muang Fang. The day was [illegible] fully clear after the previous night's rain. The town, [illegible] in shape, was surrounded by a moat and walls of half-rotten [illegible] with a backing of outer 2 feet thick. The walls had originally been crenellated, but now trees, not less than sixty years old, were growing on them. A great deal of the town was jungle, with a street [illegible] roughly laid out. The surrounding rice-fields were extensive, but very little was actually under cultivation. The few pagodas were more than half in ruins.

At the junction of the streets stood a curiously designed building said to have been built by a man starting a new religion, the [illegible] tenet of which was that the people should not respect the priests. Inside the town there is a small hill, with a broken down temple and pagoda, and through the town flows the river Mae Chan, which comes from Doi Pahom Pok ("Covered Blanket Mountain"). The

magnificent mountain stands on the north-west, and is the place where was fixed by the Indian triangulator, [illegible] resolution to start my work from this peak.

The governor was querulous about his poverty, which he said was caused by Pia Pap and a number of collectors. For ten years a body of ruffians from the Salwin had committed all manner of diabolical deeds, causing great misery over large parts of country. It was at the head of some of these that Pia Pap had occupied the town. Fortunately, none of the chief rascals had been killed. Pia Pap's nephew had been wounded and taken prisoner. The governor complained that he had not the wherewithal to carry on government, and that the Chao gave letters to men at Chieng Mai, enabling them to collect jungle produce and fishes, so that he could not collect revenue.

CHAPTER XXV

THE MUSUR COMMENCING TRIANGULATION

I was anxious to make arrangements about Pah m Pok and as the head Musur was at Fang, I took advantage of his presence to make inquiries. The answer, I believe, was, "There no mules and you cannot go." I asked how he managed to come and why should not be able to go where he went, as he was a very old man. Yes, an ninety four years of age he was certainly over sixty—"at you must go to Muang Han, if you want to get to Pah m Pok." I replied "Muang Hang is many days' journey while Pah m Pok is over there quite close at hand." He laughed, thought it a great joke, and said he would be glad if I came to his village, and that he would give me every assistance.

Later on the Musur paid me a visit, a little whisky warmed them up. One of them pulled out from the secret pocket a reed instrument, and they all joined in a Highland fling. The man was proud of the performance, and they left in good humour promising every sort of assistance.

The next day I was able to get only ten men together but borrowing an elephant from a Shan settler I pushed on to the Musur village. The term "Shan" is a Burmese corruption of Siam, but in Northern Siam it is applied to the Tai of the Salwin, whom the Siamese call Ngio. The Siamese also call all the northern people Lao, who, however, resent the term, and call themselves Tai. As early as possible I was off, having put my baggage on the elephant, and we were soon climbing the mountain along an excellent path. When we reached a height of about 1000 feet above sea level, we came on the extensive clearings of the Musur, and met some of their men quite at home swinging excellent axes of their own manufacture, and felling in every direction valuable hardwood trees regardless of

their nature. The trees are allowed to remain where they fall for two or three months, and are then fired.

Haze is always a serious obstacle to the progress of survey work, but with the smoke from burning trees added, it rendered operations next to impossible. As we mounted the hillside among oak trees, the air was very refreshing. Towards evening numbers of Musu—men, women, and children—came over the hill slopes, and joined us on the main path to the village. They carried cross bows, antiquated guns, many of them of the good old Brown Bess type, dating from the time when "George III was king" with the tower mark on each. About sunset we approached the village, from the stream the ascent for 200 feet was very steep, and it was growing dark as I took up my quarters under the trees just above the village. There were numerous naked little children running about, not very clean, but active, and great hill climbers. We boiled a little tea and about [illegible] p.m. the poor old elephant put in an appearance, after laboriously climbing up the hill. There was great commotion at his coming, an elephant never having been seen there before.

The next day I halted, and sent the elephant back, as fodder was not easily procurable. The village was in a hollow, and quite 5000 feet above sea level; the trees surrounding were all cleared. The houses, built on bamboo platforms, were thatched, the headman's being a little larger than the others. A house standing apart, surrounded by a stout palisade, no stranger was permitted to enter. This was the spirit house and place of public worship. One day in the week is set aside for public worship, and they told me that on that day he who enters must have fasted, but I think this was an obligation invented for the moment to prevent me from satisfying my curiosity. They say there is nothing inside but a few scrolls, which they received from their fathers. This statement also must be accepted with caution, seeing that in the community there is no knowledge of writing. It is said that the Musu originally came from China, and, according to their own account, they are brave warriors, having been recently engaged in great battles. These people are evidently being pushed south, and it is necessary on their to have some story about the battles they have fought to satisfy the Governor of Muang Fang that they are not the advance guard of an enemy. They pay a trifling amount of wax as a tax, and are allowed free settlement.

They are the pioneers who clear the way for the advance of civilization. The Chinese are evidently developing in their own country, and pushing west and south; hence the strange mixture of old tribes and tribes, who in the last ten years have come to range themselves beside that no human being ever approached before.

With the elephant I shared the honour of exciting curiosity among men, women, and children swarming from every village and issuing out of roots of bamboo. The very small children were slung on backs of the mothers, and peered with their small black eyes over their shoulders.

The women had the hair fastened in a knot on the top of the head, and wore a turban with a broad flap above. In earrings they had hoops of silver, from 3 to 4 inches in diameter and a quarter of an inch thick, and round their necks they had circlets of silver and circlets of cane. These latter are an absolute necessity in the dress of the women, as without them the spirits would carry them off. They wear jackets and skirts, alternate with grey-white cloths, and in the case of the richer class with large silver buttons.

These tribes practice monogamy. They say they originally came from Muang Ko, under China, but when I questioned them I could only ascertain that they came from the provinces of Cheng Tung and Cheng Rung, and not further beyond the Nam Kawng.

There are eleven tribes: Pak, Peho, Hu, Ta, Sa, Pa, Kel, Kulao, Weng, Ho, Cheng Tung, Hoe, Nu, Cawlaw, and Cheng Rung. Men only live in the invisible world of the spirits of the mountains. They burn the dead who die from disease, and bury those who die from some accident. This is the custom among the Lao.

Wild tea grew all over the mountain. The Musu used the leaves, but they did not cultivate the plant. Near my tent was a tea tree, which, 2 feet above the ground, was 2 inches in girth.

I got together some Musu, who provided themselves with axes, and, with their supplies in baskets on their backs, trudged with me to the top of the hill. Over nearly the whole of Indo China the climbing of the highest point of a hill is not so easy as it looks. The forest is very heavy, and not even a glimpse of the surrounding country is to be had, unless one climbs up a high tree at the summit of the lofty peak. This was a duty I used always to undertake myself, but I found I was not quite as nimble as I had been, and found my

want of agility by many unnecessary moments. Often we found we had not reached the highest point, there began a higher in another direction, perhaps 2 miles off. Then backing through angle after growth down and up steep slopes, wandering about and resting at half a dozen likely points, at last we gained the top.

If it happened to be raining, walking was insupportable, for it was very difficult to keep one's footing, and the men and instruments had every thing. In our difficulties the little instrument showed what a useful companion it could be, for it enabled any station on the height of the mountain one was in search of, this valuable little instrument saved a good many moments of doubt and anxiety.

Pahom Pok, however, was not difficult, and on February 24 I reached the top. To the west was a perpendicular scarp, which made the clearing all the more easy, and we started hacking the trees at once.

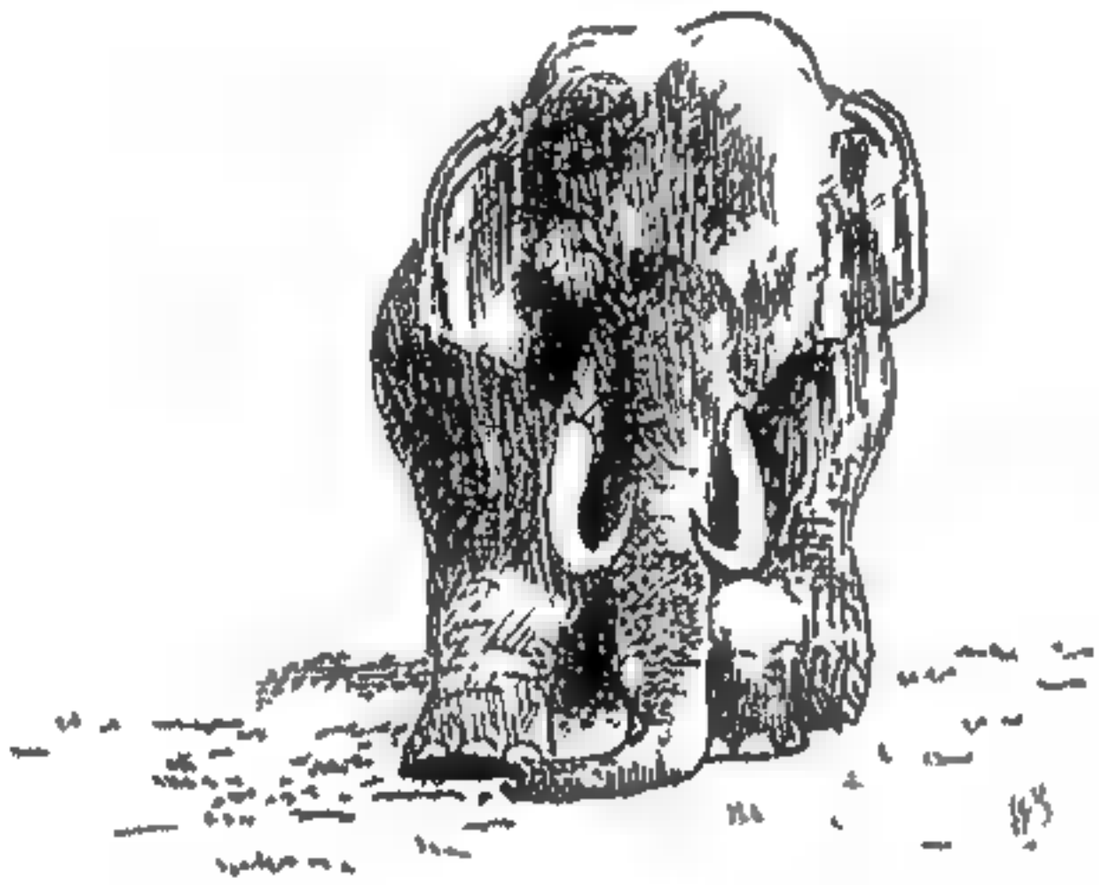
On February 25 every available man was busy, and the Musu showed themselves excellent workmen. On the evening of the 26th we were ready, and all but two signal trees were cut down. The haze had set in, and there was a gloomy prospect for the work. Some strangers put in an appearance, and called themselves Musu Saleng. They were very Chinese in appearance; the women did not wear the Musu skirt, but wore trousers.

A strong wind was blowing from the west, and remembering the forecast of the signaller of the Indian survey I was hopeful. The Indian signaller always held that south and east winds in winter bring haze, but that the west and north winds drove it away. Haze is always heaviest in limestone localities.

Strange to say, the morning of the 27th was gloriously fine, and the remarkable peak of Chieng Dao stood out well. The longitude of Chieng Mai had been determined by telegraph signals, and Chieng Dao fixed from Chieng Mai. Therefore I wished to feel sure of the position of Pahom Pok, and, observing for latitude and azimuth, start a triangulation which might be carried round Siam. The late General R. G. Woodthorpe, R.E., C.B., kindly supplied me with the Indian survey value of Pahom Pok, and on this value the whole of my work has been based.

Looking over the vast expanse of mountains clothed to the top in forest, I resolved to advance over the country. The triangulation seemed a gigantic task, and one which could only be accomplished

roughly, but, even so, it seemed to be best methods in the survey. Checks of latitude and azimuth could be taken, and at intervals there was enough flat ground for the measurement of base lines. The great difficulties were the sparseness of the population and the heavy jungle. The haze had now set in, and, until rain fell it was hopeless to attempt any triangulation work, we therefore filled up the time with chain and compass traverses.



Watching for a bowtah

CHAPTER XXVI

WORK IN CHIENG SEN

When I returned to Muang Fang the Chief of Chieng Mai was at the sacred cave, going through his pilgrimage, and the Musur of Pahom Pok had been sent for to amuse him. The old Musur's entry into the town was in great style. He was seated on a pony, and, as the weather was warm, he had dispensed with his coat, a gold umbrella being held over him. He was immediately followed by a number of Musur blowing their favourite reeds, and others with swords and guns. The rear was brought up by a woman, decked out in a great quantity of finery, and evidently representing, all by herself, all the wealth of the maidens of the village. The Chief of Chieng Mai entered in state with 120 elephants. The late Dr. Cheek accompanied him.

Preparations were also made for hunting over the plains of Muang Fang. I accompanied Dr. Cheek, who had about twenty elephants to beat up the different varieties of deer and pig, but an attack of fever marred my enjoyment of the sport. Though it was plentiful, we were not over successful. One party was chased by a wild elephant, which had been giving trouble to the tame ones.

The chief left Muang Fang in great state, with bugles blowing and drums and gongs beating. He was seated on a magnificent tusked elephant; before him marched about fifty soldiers, and behind him a large company of men armed with spears, while his favourite wives, each seated on an elephant, graced the rear of the procession.

Phra Srisdi came at this time into Muang Fang. He had completed an excellent round of work. There were now eight young Siamese gentlemen with me, and I am glad to send them measuring routes in all directions, making Chieng Sen their rendezvous.

On March 15 I started from Muang Fang, traversing. It was so hazy that mountains a couple of miles off were invisible. I passed

through some villages of Nyi-se Aloes from Chiang Tung, Muang Hing, and Muang Tum, who were looked upon as being excellent guards. Until the English occupation of the Shan States, the unfortunate people of those regions knew no peace, but were scattered in all directions. Some of these settlers in outlying guard-stations were very poor. They had to look to the forests to supply their wants, and had constructed temporary grass sheds while clearing the jungle for paddy land, which was to supply them with food in the coming year.

The previous year Pha Pap in his flight had taken all his people, others had followed in his track, and had fled the wretched huts of Muang Yawn and Wieng Ko across the Nam Kok. The path led through thick bamboo jungle, and, as I had fever, my progress was slow; it seemed hard work clambering up and down the hills.

On the 24th there was a thunderstorm, with very large hailstones, one of which I examined. It had the shape of a strawberry, very smooth at the broad end, but the rest rough, as though composed of four or five different hailstones. It was 1½ inches across. The atmosphere had been temporarily cooled, but the people anxious about their fields, had begun firing the jungles. The clearings had been made some months before, the cut trees had had time to dry, and were now cleared away by the ashes burning around them. The smoke added to the haze, rendered everything in the distance invisible except the sun, which pierced the gloom with a dull red light.

The Shans of Muang Yawn may be regarded as very honest, if the character of a whole community may be learned from the behaviour of one man. At that town I had procured a Shan guide, and now sent him with thirty rupees to buy rice. He was absent all day, and brought back a large quantity at a cheap rate. It would have been easy for him to return to his home, and he certainly would have done so had we suspected him of "dacoiting."

I reached Muang Tum on the 28th, quite knocked up with fever. The two headmen came to me, and very politely told me that Muang Tum belonged to Chiang Tung. I explained that not the settlement of the question, but was merely inquiring about the boundary. As I was very ill of fever, I went to bed as soon as the tent was up.

Muang Tum is a very fine plain called the Nam Ka, surrounded by lofty peaks, which the Mesu were inhabiting. The inhabitants are of the race known as Ka, and they have the reputation of being the best people among the Shans. All through the afternoon a number of tastefully dressed women and children brought presents of cakes, molasses, eggs, and with the most engaging smiles said they had come a long distance to make presents.

The Bank of England could not stand the strain made on it. In the course of the day some extraordinary fellows put in an appearance, tattooed from neck to heels. One fellow, who said he was the Governor of Muang Kwan, was very impertinent, and wanted me to retrace my steps, saying that he would not allow me to go to Muang Kwan. The Paw Muang told me that the fellow was from the west of the Salwin, and had been with the adventurer known as Twet Nalu, who had done great mischief. The Chief of Chiong Tung kept him as a fighting man, and had employed him a short time before to commit some murders at Cheng Lau and Muang Lim (or Mi Lem). He also told me it was this man's followers who had killed and robbed some unfortunate traders from Nawng Kai in January or February, 1889.

A great number of villages were settlements of robbers, it being thought a good plan to have robbers on the borders, to act as guards. Some of the traders I met here were Chinese Shans, and it was pleasant to see how they stood up for the Chinese. While humming over a sword, I had a good opportunity of ascertaining some of the Chinese methods of government.

Whenever the officials in their journeys, I was told, stop at a place, the inhabitants must supply their and their followers with provisions for three days, but after three days payment is made for all supplies. The only grievance seems to be that the Chinese head official insists on being carried on the necks of the people—of course, in a sedan-chair.

A Chinese Shan trader desired to look at my gun and to see a shot, but was in no way surprised at the breech loader. It pleased him immensely to hear the noise, but, returning the gun, he said they had much better ones in China, where you could fire ten shots at once. I noticed that the Chinese Tai seemed to talk purer Siamese than the Shans from the Salwin.

An image of Gautama was being completed, and offerings of

silver were being placed in an opening in the chest of the figure. The Paw Muang gave me four guides, who served as nightly as a guard, and we moved off to Muang Kwan. On the way we met with some men digging for gold. Muang Kwan is an excellent position, with undulating hills and a goodly number of ice-cold streams. I pitched my tent on the river bank, and saw nothing of my fellow-travellers. All the settlers were from the Salwin and the western Shan states. A number of them, tattooed from head to heels, were sitting about the camp. I noticed a little boy, about ten years old, with about twenty other lads as followers. They told me he was the son of Twot Nalu, the adventurer of the Salwin. In marching to Muang Kwan I followed the path over the mountains. There was a path down the Nam Sai, but it had been made difficult in order to facilitate the escape of the robbers. Our road passed through the clearings of the Kaw and a number of abandoned villages. The houses were very large and substantial, but the Kaw never settled long in one place, as soon as a couple of deaths occurred they attributed them to the evil influence of spirits, and moved off to another locality.

I was not able to meet any of the people. On the side of the path, about 50 yards across the stream, I saw an old woman with a load on her back, toiling over the clearing, which was covered with charred trunks of trees. She was accompanied by two children, and as soon as the mother caught sight of me they left the old woman and scampered away, skipping like monkeys from trunk to trunk. At intervals they pulled up and spoke encouragingly to the old woman, who seemed not to be using the choicest language.

I met a number of Musur in the country east of the Mo Kwang, taking buffaloes to Muang Kwan. The buffaloes were to be sold by friends of Muang Lem, long enough to buy them. I reached Ban Kaw, an abandoned stockade, near which was a deserted temple. The stockade and temple were built at the same time, and were evidently in a position suitable for a guard house. Lem's and Wan's were thus established side by side, and, the object having been accomplished, they were abandoned.

From this we passed over the plain of Chang Sai, which owing to great floods, was almost bare of trees, the few that existed being very stunted. As we approached the town of Chang Sai we observed a great number of logs. The town was surrounded by low

hills, all famous in local history, and the old governor, who was a nervous and excitable man, and like the second governor, had extraordinary and very wild legends about them.

To the south, and beyond the low hills, but [illegible], is a large swamp teeming with fish, on the east side of the Mo Kawng, and, as the soil is very productive, the people are easy and hard. Every man in Siam is an excellent farmer, and the cultivation of fruit trees is a favorite employment of wealthy men, who take a delight in making the soil disclose its riches.

Chieng Sen is remarkable for its excellent cast images of Gautama. Some are very large and very beautiful. At one time there were hundreds of those known as *Khatamepat*, regarded by the Siamese as being very ancient. As they were of a convenient size, they were carried off to Bangkok, where they would be better cared for. It was looked upon as desecration that they should be allowed to moulder away in ruins. The inhabitants of the city are nearly all officials, for the settlers, chiefly from Lampun, live in villages scattered over the plain. The settlers pay no taxes, the rent is too cheap and easy, and it is very difficult to induce them to work.

The son of the governor came to tell me that some Indians were coming. As Indian surveyors had been working in the neighborhood, I thought it not impossible that they were returning again after having completed their boundary work. I was rather surprised to find two Europeans put in an appearance, one was M. Massie and the other M. Vacle. M. Massie was from Luang Prabang, from which place he had gone to Sai, and thence to the tea-gardens at the head of the Nam U Ibang, and Iwu. In the [illegible] he had been joined by M. Vacle, a resident of one of the Tonkin provinces, and together they had gone to Chieng Hung, but before their arrival there Mr. Scott had already left for Chieng Tung.

They had come to Chieng Sen by way of Muang Lot, and had been much interested in their journey, but felt somewhat disappointed that the English mission had been over the ground before them. They had the French colonial new coins, the *piastres de commerce*, about the size of a Mexican dollar. They could not however, use them, and I exchanged the good old rupee for a few of them. I do not think the *piastre de commerce* will ever travel like the rupee, which, a few years ago, I saw current nearly to the shores of the Gulf of Tonkin.

The two Frenchmen were deeply interested by the ravages of the cattle plague, which they thought would spread [illegible] On April 20 they left Cheng Sen by boat for [illegible] the few days they were at Cheng Sen they proved themselves agreeable companions.

CHAPTER XXVII

WORK UNDER DIFFICULTIES

To the discomfort of the fever, which had been lingering about me for months, were now added troubles incidental to the survey work. Pra Sisdi came in to tell me he could discover no mountain where I had indicated one, as the haze and smoke had been so thick that nothing could be seen. Another Siamese officer informed me that all his cutters had run away, and he did not know what to do. Rain had been falling, and the atmosphere was very damp and cool; so I pulled myself together, and on April 25 left Chieng Sen. I stopped at a small hill, Doi Palu, and had it cleared, urging the men by degrees to the work, in proportion to the heavy labour involved in clearing some of the bamboo clumps, while the trees were of immense size.

At Ban Mechan, which is an excellent position at the junction of the roads from the north to Chieng Mai, on awaking one morning I found that the men had run away. The Governor of Chieng Sen was now on his way to Chieng Mai; but when I showed him that his duty was not to leave the district without a responsible head, but to remain and give me all the assistance in his power while the favourable weather lasted, he complied with my views and decided on helping me.

On May 1, having succeeded in getting men together by noon, I set out and, in the evening, encamped at the Hot Springs. These springs were the most remarkable I had seen. In many parts of Siam hot water rises to the surface of the ground; but here jets at boiling heat played from openings in the rock, in some cases to the height of 2 feet, and all round there was a din and hum as if from many small steam-engines. At one fountain there was a natural sulphur spray.

Moving along the Mi Chan, we left one of the Chaowans with

elephants and ponies at the foot of the hill, and, passing through Musu settlement, we encamped at an abandoned village, where the people of Muang Ngam, having been burned out of their homes, had taken refuge the year before.

The next day we had rough work cutting our way through the thick growth, and towards nightfall descended to look for water. The jungle was heavy, and the ravine so steep and narrow that had difficulty in putting up a tent 6 feet square.

During the night we were disturbed several times by a tiger, and the shouts of the men made it difficult to ascertain whether any one had been carried off. As I had lost a man in the Malay peninsula in this way, the suspense was very distressing; but, fortunately, on this occasion there was no casualty to record.

In the morning the Musu guides struck tracks for their homes, and we had to go on without them. Their departure was no great loss, for they seemed unable to understand exactly what we wanted, and had often led us wrongly.

The small bamboo jungle was very thick and full of tracks of wild cattle, that seemed very plentiful. Wild tea grew everywhere. The stumps of trees bore marks of the axe, showing where other travellers had passed. Our effort was to reach the highest point of the deeply serrated ridge, but mists and rain impeded our progress, and our rice supplies began to run short. After we had cleared the summit which seemed to be highest, the mists rose, and revealed a higher not a mile distant, but as the intervening ravine was exceedingly steep and rough, which it would have taken a whole day to cross, we resolved that the peak on which we stood, one of the range called Sam Sao, would, in the circumstances, serve our purpose.

There was a little trouble about the reflecting-lamp for astronomical observations, as the utmost distance at which I could place it was 300 yards. A tiger prowling about and howling made it uncomfortable for the men at the lamp, and my observations were somewhat hurried.

The next move was to a mountain called Ban Son Pem, at the summit of which stood a Musu village. My Chinese cook now caused much trouble. He said he had the fever in him, and he was constantly losing himself in the forest on one occasion being absent all night. I found means of sending him to Chieng Rai.

At this time I was seized with an extraordinary complaint, suffering from constant vomiting and pain so severe that I was compelled to lie down from time to time on the side of the path, and the marches were very distressing.

On the hills were numerous palm trees, which seemed to be of the species described by Humboldt. The fruits were in bunches, consisting of several hundreds, and were eaten by the people, who knew nothing about the liquor so highly praised by Humboldt.

Local superstitions prevented our approaching the hill top, on which was a spirit-house and, to the north-east, a hollow, 2 feet deep and 40 feet in diameter said to be a disused silver mine, but now overgrown with trees thirty years old.

Here, as in other Musur villages, there were a great number of children. The mahout was about naked, and covered with sweat from the charred trunks of trees. Observing a man in the crowd admiring his countenance in a looking-glass attached to the cover of a tin box in which he kept his tobacco, I borrowed the mirror, and frightened one of the youngsters by showing him his own face. He ran off like a hare, and was soon vigorously washing himself at the village spout. The children were keen beetle collectors, and in purchasing the specimens they brought me I found a ready and the only way of disposing of the few *pousses de commerce* in my possession. The village was very filthy, but as it was on the top of a hill and exposed to great storms which came sweeping over the Tonng, Pra Yao, and Chieng Rai plains, it was better than it deserved to be.

The Musur cultivate cotton, Indian corn, hemp, and rice. The rice is that known as *Iao chao*, "prince's rice," to distinguish it from glutinous rice, which, nevertheless, is eaten by princes and peasants alike. The name of "prince's rice" was puzzling to our men, and to those from Chieng Sen it suggested a grievance, inasmuch as they, being Lao, were entitled to prince's rice, but partook only of the common sort. The forests contained wild mangoes and other fruits, which on our way to Nangle came in useful, as the men had run short of supplies.

From Nangle an excellent view was obtained of the surrounding country, but the top was bleak and flat, and to clear it of the large trees was a heavy task. Two of the trees I left as signals, and then

descending to Chieng Rai, connected Doi Tat Tung (Hill with the Golden Relic").

Chieng Rai is a walled city, and claims to be very ancient. The old governor was ill, and the town was neglected, being overgrown with jungle. Here we had much trouble, as the authorities would not give a man to assist, not even sell rice, asserting that the tops of hills should not be cleared of trees.

Before stopping the work for the season, there was one other high mountain I should ascend. Leaving Chieng Rai the next day, I crossed the pass, which was so low that I scarcely perceived it, and encamped at Ban Mechan, from which place Doi Tung was seen distinctly. Doi Tung is a name given to a mass of mountain, from a pagoda built on a peak overlooking a perpendicular limestone precipice, formerly a place of annual pilgrimage for the Shans of the surrounding country. The highest point of the range is Chang Mup, which we were about to attempt. We pushed on through the village of Hue Lai, and encamped at the foot of the hill, meeting a number of people, chiefly women, washing for gold. The mountain rises beyond the range of malaria, being over 4,000 feet high, it has oak trees, and affords an excellent view over the Chieng Son plain and the mountain-range beyond.

I returned to Chieng Son on June 7, and felt great relief in taking up my quarters in a comfortable house. I had passed through much trouble which would have been a great load worse but in the assistance given me by Pin Sisali.

The triangulation round Siam had been started with great difficulty, but still a beginning had been made. To prevent delays in taking the field, I resolved to remain here during the rainy season.

After seeing my things in the house, I went out to employ some work on a small hill about 2 miles to the south. While taking a round of angles, I was horrified to see my house and things. I was too far off to think of hastening to the rescue, so I finished my work, and then descended to find my place burnt to the ground. Most of my things were saved, but I was sorry lost everything except the clothes he had on. This was a terrible position for him to be in after a severe season's work, but worse was yet to happen.

Nai Tat, brother of Pin Sisali, had started to Muang Sing selecting

his own house. He had not been gone six days when Pat Strachan came and woke me up at twelve o'clock at night to communicate the news of the murder of his nephew. The poor lad had been the quietest of all the Siamese I had known, and could have given no provocation for this cowardly outrage. I set out at dawn, only to make inquiries, but the chief of the district, meeting me on the way, begged me not to go, as there was a plot to murder me also, and my steps had been dogged for the last month by assassins. I had ten men from Chieng Sen with rusty flintlocks, and the poor fellows would have proved the worst of my enemies, but as it was more than likely that my interference would only add to the complications, I returned to Chieng Sen to devise means for bringing the murderers to justice.

Nai Tat had had ample experience in jungle-travelling, having years before accompanied the French officers over Chieng Kwang, Luang Prabang, and Hua Pan Tang in Tonkin.

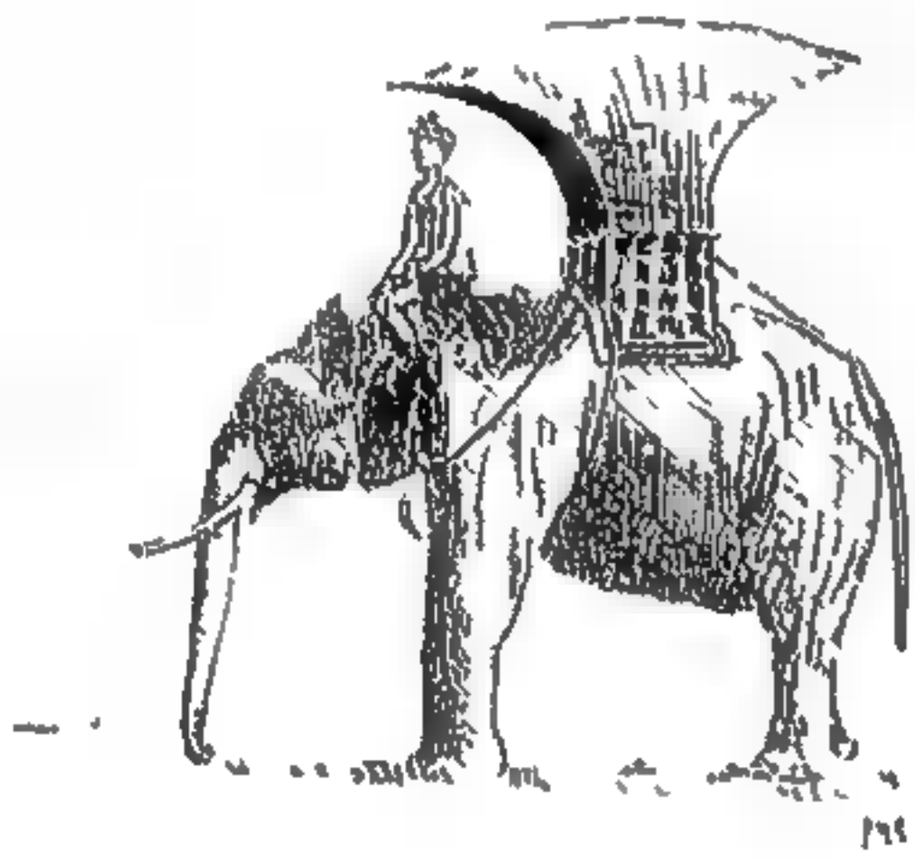
Provided with money to purchase provisions and to engage coolies for his journey to Muang Sing, he had passed through Hawng Luk, a rendezvous of dacoits from the Salween and had encamped beyond Muang Ko. The governor of that place was a Kolan, and undoubtedly trustworthy. There in the moonlight on the evening before the murder, Nai Tat had seen about thirty men pass, among whom he had recognized some from Hawng Luk.

On the morning of June 5th, aware of danger, he was moving up to the pass to Muang Lem, when suddenly shots were fired, and he fell wounded. General fire to cover, and the coolies threw down their loads and bolted. Nai Tat was left dead when his assailants proceeded to mutilate him, hacking off his fingers and ears, and then cutting his throat. They then rifled his pockets, tore the buttons off his coat, took his watch and chain, and carried off the twenty-eight loads of baggage, in which were a chronometer and sextant. Nai Tat's companion, a lad of eighteen, who had been learning the work, happened to be among the carriers at the time, and the assassins deliberately aimed at him. He escaped to Muang Ko, and the governor, treating him kindly, accompanied him with an escort to the scene of the murder, where together they assisted in the burial of the victim.

I forwarded a telegram to Mr. Scott, the superintendent of the Shan states, but, unfortunately, he had been transferred to Bangkok

After some time investigations were made, but their only result was a vague statement that somebody had done it.

I sent Phra Srisdi to Bangkok, and, as all my people had fever I decided on remaining for the rainy season at Chieng Mai. This I did very reluctantly, as it meant delay when the time came to take the field.



CHAPTER XXVIII

RESSAGE NORTH [illegible] ON [illegible]

On July 5 I left Chieng Sen, descending the main river the Me Kawng, and, as the current was very strong I reached Chieng Kawng in less than six hours. This city protected by a wall on three sides, but exposed towards the river, looks as though surrounded by mountains, and one would little suspect that beyond the low hills on the south is the wide plain of the Me Ping.

At the western extremity of the hills there is a small settlement, and a pagoda has been erected in memory of a famous Burmese warrior, who died on his return to Burma, after a successful expedition to Luang Prabang. The whole of the forest covering the hills is of teak, probably the finest teak forest in Siam. On one of the bank of the Me Kawng there are two teak forests, the great river serving, apparently, as a natural line of some sort in the least, the form of indo China.

In the neighbourhood of Chieng Kawng, we found that some excitement had been caused by the discovery of sapphires, and a few of the stones had my good value. In various parts of the province of Nan precious stones have been found, and at Muang Sing, a little further south, they were said to exist in great quantities. At that town there were over [illegible] resident Burmese, attracted partly by the teak forests, but chiefly by the precious stones, for it was well known that the Chieng Nan [illegible] to Burmese, [illegible] of that nationality having caused much trouble by forging his seal to a document.

On July 12 I left Chieng Kawng, and travelled the route along the base of the hills, where there was an excellent road. Nearing Ban Tung Yang, we went over the low pass between the valleys of the Me Ing and Me Lao. The pass does not rise more than [illegible] feet above Chieng Rai.

There are peculiar limestone rocks 200 feet high, on which there is a sacred footprint, and in the neighbourhood are the ruins of an old town. The west approach had very heavy angles and cane brakes, and an open space with stable awakened a feeling of superstitious awe. This was said to be the haunt of spirits, and there was a legend of a number of Haw (Chinese) having been massacred there in days gone by.

The region would probably form a happy hunting ground for the geologist, or in similar localities elsewhere there would be found fossil remains of monster reptiles. About eighty years before the Burmese army had gone over the pass and ravaged the valley of the Me Ing, destroying Pha Yao and Muang Taung. This latter place has been recently rebuilt, and is the capital of a great district which flourishes by the teak trade, the working of antimony, which is there found in large quantities, and the discovery of gold.

Descending to the valley of the Me Lao, the path went through long grass over a country flooded by the heavy rains, there was not a breath of air, and the heat was intense.

On July 17 I reached Chiang Rai, still suffering from fever, and worried with heavily trudging over the wet ground. After a few days' rest I procured an elephant and set out for Chiang Mai along the route which the Siamese Government had carefully surveyed for a railway.

On July 27 I reached Chiang Mai where the lively European community had received considerable accessions. There were now over a dozen missionaries, the railway engineers had been provided with quarters in the town; and we found that local interest had for the time, centred in some prophecies which the whole population, including the old chiefs, had turned out to see.

I was able to find quarters in a comfortable house belonging to Dr. Cheek, and there I "recessed" during the rains finishing the compilations in connection with the work, preparing accounts of the triangulation which had been undertaken and such difficulties and obstruction.

For three or four years the rainfall all over Siam had been extraordinarily short, and in Chiang Mai the crop was half not produced. It was alleged that he had shown too little zeal in the pagoda on Doi Sutep, and an angel was said to have appeared commanding that the chief should be provided with a new top

decorated with precious stones. The royal wives also [illegible] to proceed in state round the city, and the superstitious ceremony proved interesting as it gave an opportunity for the display of the finest elephants in Chieng Mai.

I had given two months notice to the transport service, and wished to leave Chieng Mai not later than October 1. That date had come and gone, but no transport. The weather was now brilliant, Chieng Dao standing out clearly defined, and, not willing to lose the opportunity, I started travelling routes to Muang Hawt, returning by the paths along the left bank of the river.

The system of irrigation adopted by the Laos is impressive from its completeness. The tributaries of the Me Ping are so thoroughly drawn off and dispersed in channels to cultivate fields and gardens that, as far as the Me Chim, none of the streams [illegible] to reach the river.

Near its source the Me Chim flows through wide forests of the long leaved pine, and in its lower course traverses excellent teak forests. At one place, however, the channel contracts to narrow gorges which render the passage of the logs downstream almost impracticable, the force of the current being such as to shatter the wood to pieces. Attempts have been made to blast the obstruction, but with little success. Near the mouth of this river, and on the Me Ping near Chieng Mai, are seen the excellent Lao water wheels of about 20 feet in diameter, peculiar to this region. They are constructed to raise water for household purposes, but are also used for irrigation.

Worthy of notice, also, was the excellent attempt at road-making by the Governor of Lampun, who had cut and piled up along the whole length of the roads. In the country generally the construction of roads has been left to chance and time. The first pioneers usually struck the best line of communication, and, armed with knives, cut through the thick undergrowth. They were followed by others, and the constant going to and fro permanently established the path, which, like a long snake, winds its way through the forest. To this day the making of a road is accomplished merely by hewing a path through the jungle, a process which has to be repeated from time to time to keep down the dense growth.

The Me Ping forms part of the boundary between the provinces of Lampun and Chieng Mai, but elsewhere the boundary follows the

limits between fields, and gives rise to endless disputes. A still greater cause of trouble is the curious arrangement by which rice tracts are under separate jurisdiction.

The telegraph line after being interrupted for four months had been at last restored, and I was informed that the survey staff had been increased by the addition of two more Europeans, Messrs. Smiles and Angier, who had already had two or three years' experience of Siam on the railway survey. I also heard that an European party, under Phra Sirsdi was proceeding by way of Nan to meet me at Chieng Kawng.

Smiles and Angier having started from Chieng Mai, I followed next day, November 29, making a slight diversion from the well beaten track, as I wished to define accurately some routes. On December 11 I reached Chieng Sen, having noticed nothing worthy of remark except that the Chinese caravans, on their way to Maulmein by Chieng Mai, were larger than usual, and the number of pones from Chieng Tung and Muang Sing following the same route were rather more numerous than on ordinary occasions. The Musu came down from the surrounding hills, bringing chiefly cotton and wax, which they bartered for areca nuts and betel leaves.

Arrived at Chieng Kawng, I met Phra Sirsdi, who had come by Nan, and, as usual, done excellent work.

On a previous visit to Chieng Kawng I had calculated the discharge of the river at a spot which was not favourable for a section. The banks were over 2000 feet apart, and the lowest level of the water more than 50 feet below the bank. The discharge was 1,200 in March when the water was at its lowest, but it amounted to upwards of 2,000 cubic feet a second.

We immediately set about ascending a conspicuous hill to the west. Near the top were some Meo villages, and it was amusing to see the villagers come up and, in a "jolly-good-fellow" manner, shake hands with the Chief, the usual salutation not being customary with either the Meo or the Lao.

The village graveyard, with tombs built of loose stones and mud, was well kept, but it was the only clean place in the neighbourhood. Meo villages generally are polluted by the poultry and pigs which are allowed to run about. But though appearances outside were not favourable, the condition of the dwellings inside was comparatively satisfactory. Eight years before the Meo were not to be found on

the right bank of the Nam Kawn, but [illegible] swarming down

One of their tribes which I was able to [illegible] has the reputation of extreme shyness, and is distinguished also by the remarkable arrangement of their women's [illegible] The great event in the life of a girl is the plastering of her head with beeswax, a covering which is allowed to remain for several years. To relieve the irritation of the skin which is induced by this and other causes, the girl is supplied with silver needles set in thimbles adjusted to the fingers.

Of all the hill-tribes, the Yao are in every way the finest. They have clever silversmiths and metal workers, and the axes they turn out would compare favourably in shape and finish with an American axe, while their method of cultivation is more thorough than that of the neighbouring tribes. The women have an elaborate head-gear well protecting them from the sun, and their embroidery work is beautiful.

The Yao seem to be peaceful, hard-working Chinamen from the hill country of Kwang Tung. They consist of twelve tribes: Lao Li, Lao Pong, Lao Chao, Lao Tuen, Sin Pan, Sin Pung, Sin Ten, Sin Chao, Sin Chang, Sin Tuen, Sin Tu, Sin Lung. To these should,

perhaps, be added a thirteenth, known as Lantan, which differs very slightly from the others. All these tribes now stretch across the Me Kawng, and the hills that have for ages been the habitat of wild animals are being occupied by men who live peacefully under their own headmen, cultivating opium and other crops, and paying light taxes in the form of produce.

Having completed the work on Doi Tung, Mr. Sun, turning my attention to Doi Tum, a convenient hill across the Me Kawng near Muang Keng. There were, however, difficulties in the way, as in the previous season the boundary commission had fixed Muang Ling to Muang Ling, and had formally taken the place over as a dependency of Burma. As all the population subject to Muang Keng were subject also to Muang Ling, there was a disagreeable hitch.

Chieng Keng was a small state more or less independent of Chieng Tung, and its ruler was always a relative (recently brother or uncle) of the chief of the dominant state. Before the British occupation Upper Burma had been the scene of constant warfare and outrage, and when order was enforced by the British administration, the turbulent element of the population sought a refuge in Chieng Tung. The Chief of Chieng Tung had at times a dispute with his brother of Chieng Keng regarding tolls at certain ferries on the Me Kawng, and, unfortunately, he employed the Shan refugees to enforce his rights. The position of Chieng Keng, with a narrow cultivable area, had never been regarded as satisfactory, and now by these hostilities it was rendered almost untenable. The chief, therefore, turned his attention to the plain of Muang Sing only a few days march to the east, where he knew there were tracts of rich of *fertile land, well watered, and fit for rice-cultivation*. There, however, complexities of old date were in existence. It is said that, in the old days, this fertile plain had been under the transitation of Sipsawng Pan Na. Muang Sing was a bone of contention between the state of Nan and on the opposite bank of the Me Kawng, but, yet, in consequence of wars with the Burmese, Nan had, for more than half a century, jealously watched every attempt at settlement there, the usual practice having been to "deal with" the settlers. In this place there was a movement from Chieng Keng in 1880; and about 1885 the chief himself transferred his establishment to the plains of Muang Sing. In 1888 a large force from Nan marched against the settlers, but, on the chief's taking an oath of allegiance,

the new community was allowed to remain [illegible] At the time of my visit the diplomatic problem was to establish [illegible] the British mission from Burma had, the year before, been received by the chief (notwithstanding his oath) as representing the Queen Empress. At this juncture the Nan officials had been unwilling to intervene, and the Muang Sing chief had resolved to negotiate directly, not with Nan, but with Bangkok.

Arranging to lay out triangles in the direction [illegible] Luang Prabang, I had to decide on the peaks towards Muang Sing I should ascend. In the official documents from Bangkok stating the object of our work, my name had been entirely omitted, and the Nan officials alleged they could not receive orders from me. As it was evident there would be a great amount of obstruction, I sent Mr Anger back to Bangkok to procure the necessary rectification, but ultimately it was resolved that the ascent of Doi Tus would be injudicious, and should not be attempted.

It was on the way to Muang Sing that Nai Tit had been murdered, and, as difficulties might again arise, I resolved to proceed thither myself, entrusting to Pra Sursdi the work of clearing and observing the peaks towards Luang Prabang.

BUDDHA

CHAPTER XXIX

AMONG THE LAMET MUANG SING

On January 1 I left Chieng Kawng and after distributing the young Siamese to run traverses and help Pha Sisdi, I started from Chieng Kawng with carriers, accompanied by Mr. H. Smiles and Mr. Sanan. An excellent road had been cut to Muang Laung Luka for the Nan officials, one of whom, Chao Bun Laung, the son of the late Uparaj of Nan, was with us. After the first march I left the well-cut road and dived into the heavy jungle, following a narrow path over rough country in the direction of a prominent peak I was making for. My friend the Nan official did not like this manœuvre, so we prepared for trouble ahead. We passed several villages of the Lamet, and their granaries, which have some features of interest. These storehouses, built sometimes as many as twenty or thirty together, and always 2 or 3 miles from human habitation, presented the appearance of a silent village. The arrangements for keeping off rats seemed very elaborate. Round the feet of the posts, covering a circle of about 8 inches in diameter, were planted needle-pointed bamboos, and the posts were placed smooth sheaves of bamboo to make them difficult to climb; and, lest this obstruction should be got over, there was a disc of solid wood about a foot in diameter fitted close to the post. It was pleasant to observe that rats and pheasants which were trapped, seemed the only legislators they had to guard against.

At last we emerged from the jungle into an open space, from which the hill I was making for, Paluul, was visible, but none of the people knew its name, and none of them wished to know. Having asked the Nan officials to encamp at a village, Mokauk on a hill 100 from jungle, from which an admirable view was obtained, Smiles and I looked about for suitable paths; but on our return we found that the whole camp had moved off. There was nothing to do but

to follow up, and we managed to reach, the company [illegible] days further on.

This was not the least of our difficulties. We would have officials with us, and we were entirely in their hands. They did not understand the object of our journeyings, resented the way in which we, and only saw trouble, which they wished to avoid. So they pretended to mistrust our intentions, the people were urging the Kras encouraging them in this. However, finding that we determined to retrace our steps and climb the mountain, on the order being given, not a single transport coolie remained in camp.

The weather was favourable, and Smiles and I started off alone. The Chao relented, and sent to tell us to return to Meksuk, and he would arrange the necessary transport. Beautiful weather was being lost unnecessarily, but there was no help for it. In the evening the Chao came and explained that we were now in the vicinity of the country, the possession of which was the subject of a dispute between Nan and Luang Prabang. I explained that nothing to do with territorial disputes, and that I had to [illegible] as much in Luang Prabang as in Nan. He then proposed to provide transport, so far as the line he considered the boundary of Luang Prabang, and only leave myself in his hands. He was drinking and a bottle of whisky from our slender store completed the process. I was in a [illegible], the path being very rough, the Chao should not accompany us. Whether the path was fair or rough, his company was not desirable. We found him, like other Siamese officials, only [illegible]. He was not badly disposed, but he had with him [illegible] men apparently officials whom he served to be the cause of [illegible]. They were very insolent, and we insisted on their being sent away, the Chao himself seemed glad that they had to go.

On January 2, with forty carriers and guides, Smiles and I started off. We passed some villages with large [illegible] more land than leaves, and, as the oranges were ripe, it was difficult to keep the men from taking them. The village belonging to Lamots but most of the inhabitants were absent, as being under the administration of Luang Prabang they feared interference by the Nan officials. Another village was hidden away in the deep shade of the jungle, on the outskirts of which was the usual slender frame of a gateway denoting the village entrance. When the guide approached there was such a noise that, for a moment, I thought trouble was brewing, but

it was the way of the people. The appearance of a stranger threw them into excitement and fear, and they all spoke together in a language which was not very musical.

We reached the Nam Tu at Ban Hin Nam. Here we met a stream, bearing numbers of timber rafts laden with rice belonging to Lawets, on their way to Luang Prabang to dispose of their merchandise. As it was possible that the carriers would run away, we made the most of the day, and pushed on till sunset. Then we pitched in a very pretty place on the banks of the Nam Siwang, a beautiful clear stream of very cold water. The Lawets as well were very noisy, but they were a melancholy people, and one seldom saw them laugh. They were heavily built, and scantily clad, the cloth they wore being scarcely large enough for its purposes. They carried loads on their backs attached to a plaited cane band round their heads, and when they were ascending a hill each respiration was a low whistle. As they dragged their weary way along the hill slopes the sounds reminded one of the songs of the green dove, so low and melancholy were they. In the lobes of their ears they had discs of wood, some of which were an inch and a quarter in diameter. The test of beauty is the extent to which the lobe of the ear can be expanded, the ear is sometimes slit in the process, but I did not ascertain whether or not this disfigurement was considered a second disqualification. The Lawets seemed very stupid, and there was great difficulty in learning their names, so as to make sure that no right money received payment. We had with us Kas, under the supervision of Nai and of Luang Prabang, and it was amusing to see the efforts made to keep them apart. The Nam Hals tried to impress their men, who had mostly sought refuge some years before in Nan territory, that they were Ka Kwen, and superior to the Ka Leo, the term 'Leo' being used as one of contempt, and resented by the inhabitants of Nan and Luang Prabang.

We were now at the foot of the hill, Phu Hul, which I was less inclined of climbing, and very early in the morning we were on the move. The slopes of the hills are usually covered with jungle, through which there is no outlook; but in this particular instance the village path led almost to the top, and, although some of the trees were very heavy, the clearing was soon effected, the little hillmen coming out to look at home swinging their axes. The views from the hill were splendid, to the south was Pa Yang, which had been cleared by Pa Sisali, and the

two trees left as signals stood prominently out. The villages on the slopes of the hills were numerous, and some of them very large; for these parts, consisting of over 200 houses, while in every direction there were traces of former settlements, rendering the prospect of clearing the mountains more cheerful. The peaks for the triangulation towards Muang Pung stood lonely out, and were well peopled.

Smiles started to run traverses northward up the village paths keeping pretty well on the watershed. At Mok Nan, where I had to retrace my steps, and omitting obstructed ends, the month in Nan meet Smiles again at Muang Puka. The basket signal was erected and the two signal trees left standing. I executed a chain and compass survey on the way back to Mok Suk, and thence on to Puka using the plane-table wherever there was an opening. This was not very frequently, except near the head of the Mo Ngon and Mo Pu, where the mountains were high and well cultivated. Approaching Puka, I met an interesting colony of Yao, on their way to Chiang Kawng. Puka had been at one time a town, surrounded by paddy-fields, but these had been left fallow for many years, and the whole place was now a dense jungle. The neighbouring hills were well peopled with Kas, the villages usually being on the tops of the spurs.

In hunting about for a suitable peak, I found that in one place the path had been blocked, and a new path cut for a short distance so as to avoid a tree that had been struck by lightning. This tree was supposed to be in the possession of spirits, but as the new path was in the possession of leeches which stung very severely, I preferred the risk of the spirits, much to the annoyance of the guide. About a mile further on another tree had been struck by lightning, but with more serious results. The tree was standing among rice on the hill-slope, and, though the crops generally were rather scanty, the owner abandoned his fields, and did not gather in the harvest, saying it had become the property of the spirits, which on this occasion were represented by numerous small birds, almost the fat boy.

I selected a hill, Kampawn, which was well wooded, and, in the deep shade near the top pitched my tent among oaks and wild cherries. On the day before leaving the hills I was told my tent had been pitched in a graveyard, and, as the people did not dig deep graves, I was rather astonished that my olfactory sense had not been offended; it was, however, explained that the graveyard had not been

used for four or five years. One of the headmen of the Kas was, as they alleged, seized by a spirit. It was curious to watch him. He had a shivering fit, and seemed to be suffering from a severe attack of colic. I gave him a dose of chlorodyne, but this did not seem to afford him much relief. Another man set about exorcising the spirit by repeating prayers and at intervals blowing on the victim. A monotonous chant went on all night. In the morning I took matters in hand, administering a very large dose of castor-oil and two large doses of salts, but with little or no effect. However, he eventually got rid of the spirit, and was restored to health. But it was thought I should not have pitched the camp in a graveyard, where there were troublesome spirits, annoyed because I was cutting down the trees.

The Chao Rajaput of Nan came in state to Puka, preceded by men bearing flags, gongs, drums, and old flintlocks, and a bodyguard of about ten men in red shirts with different kinds of breech-loaders. Smiles joined me at Puka, and I immediately made arrangements to go to a prominent hill called Chieng Kung while Smiles traversed the country to Muang Sai, where we were again to meet. I now took the road to Muang Sing, and when the path crossed the range between the Nam Pa and Nam Ma I turned west and followed it. The road was troublesome where it had to be cut through rubbish and creepers growing on abandoned Yao settlements. At last, however, the top was reached, and, as there were no heavy trees, I was encouraged by the prospect of soon clearing the hill. The trees were beautiful. When the hill was cleared, on the morning of February 5, there was a thick haze, and nothing could be seen. But in the afternoon a high wind rose and clouds gathered. The names of all the prominent peaks had the prefix Chieng, which, I was told, in Siamese meant "high land." Major Gerini, however, informs me that the original inhabitants of these countries and their towns were called Ch'eng. Even to-day the Kas of the high tablelands of Puan are called "Ka Chieng."

The work was delayed by mists, but occasionally I had a glimpse of the surrounding country, and was able to leave the hill on February 12. I had also cleared a peak 200 feet lower, and distant about three quarters of a mile, which had obstructed the view of Kun Lawn. Leaving a signal-tree, I moved on to Dao Wa. The slopes of the hills all round were peopled by Yao, some of the villages consisting of 200 houses. I had an amusing hour with many of the inhabitants,

who wear an amount of beautiful spoons or embroidery in silk and to put with a number of dancers, which were ordinary Chinese and could be seen by my boy. An old man was a silversmith who was very proud of his handiwork as I believed I discovered to be, judging from the bracelets and rings which he showed me. A great number of these Yunnanese from Muang Pai, which they had abandoned after the French occupation to move over and settle in Muang Sung.

CHAPTER XXX

TANKEN SLAUGHTERING — MUANG SING

On February 1[illegible] I met Chao Bun Luang at Ta Muang Nung. Climbing to the tops of hills was not to his taste, nor did I desire his company. But when, even in his absence, I was detained in the hills, I was still at his mercy, for I had to look to him for rice supplies, and he never lost an opportunity of exercising pressure.

I had wished to make observations from a number of [illegible] hills, but the season was now far advanced, and delay might have made it impossible for me to determine the position of Muang Sing. I therefore pressed forward through the thick haze, and crossing a very low pass, descended to the wide plain of Sing, watered by several streams which find their way to the Nam Ta. Approaching the settlement, I met some headmen of the Yao, who wore metal buttons bearing the Queen's head and an inscription, "Victoria Queen." I drew one man's attention to the stamp, and he seemed to understand what it represented. The buttons seemed to me, at the time, to be silver gilt, consequently of the value of an eighth of a rupee; but I did not examine them closely, and I afterwards found many similar, of brass, exposed for sale in the market at Nawng Ka. Muang Sing was about 1000 yards square, surrounded by a mud wall and ditch, and everything about the place had a new appearance. The governor's house was in the centre, encircled by a strong palisade. The streets were divided into quarters, each quarter being under the command of an official. On the plain, which was from [illegible] to 2 miles long and 4 to 6 broad, there were villages of settlers from the surrounding districts. In seven villages the settlers were from the province of Chieng Tung, and in eight villages from Muang Hun and Muang Hun of Sibsawng Panna. The plain is capable of great development, and might support thousands.

I pitched my tent on the grounds of a wat near the eastern

entrance, and visited the governor, a grandnephew about sixty years of age, and uncle to the Chief of Chieng Tung. He did not like the idea of his little state being broken up one part to be under Siam and the other under Burma. To the west Sing rises peaks some 7000 feet high, overlooking the Nam Kawng, which in a direct line is not far off.

On the mountains are interesting and peaceful tribes, called Aks. They come down to Sing for the market, which is held here as in most small places all over the north of Siam, every fifth day or the week. Over the plain were many camps of Chinese traders. These men went no further than Sing, and when they had got together a sufficient quantity of raw cotton, they returned to Yunan by way of Chieng Rung, which is eight days' journey.

Finding a place that could be fixed by interpolation, I connected it by means of a rigorous traverse with a point just outside the eastern gateway, where observations were taken for latitude and azimuth. Later on I went out to meet the Chao Rapute of Nan, who advanced in semi state with ponderous looking elephants and a good deal of drumming and gong beating. But the chief did not go out to receive him. The Chao solved the difficulty by calling on the chief, and I have no doubt that two wrongs make a right.

It was high time for me to be on the move. I had brought with me thirty mul tiamen of Nan and I now kept only nine, paying off the others. On February 23, 1892, a very hazy day, I started for Pubokat. Our men followed the usual caravan route across the plain, but at the pass, which rises only a few hundred feet, it left the caravan track and struck in an easterly direction along the ridge. The pass was of some importance, as it was in the boundary-line of Sibsawng Pana, Nan, and Sing. As we passed along the ridge we had glimpses of Muang Man, and of the lakes of Muang Pang in the valley. Having reached the peak Pubokat, I had it cleared of trees, but the haze was dense, and nothing could be seen. On a large tree Chao Bun Luan, placed an inscription commemorating our visit, and calling the tree a boundary-tree.

I now pushed on to Muang Luang Puka, travelling along the bank of the Nam Dung. The path was rough, and under water until near its junction with the Nam Ta, we left the stream. Here we found an abandoned Lanten village and some fresh graves, the people all having moved off to the Muang Sing administration. Leaving the Nam

Ta to the right, the path in a bad one descended hills with extensive clearings for cultivation, and passed through large villages of Lanten, who had great bales of cotton ready for the spring to Muang Sing. They had an ingenious contrivance for applying water-power to pound paddy and separate the husk from the rice. In other places paddy is usually pounded by two or three girls standing on one end of the beam, to the other end of which is attached a heavy wooden mallet, a regular see-saw being kept up. Here the place of the girls was taken by a box which filled with water and descended. The bottom of the box worked on a hinge which opened inwards, and when the box reached a post fixed in the ground, the bottom was pushed up. The water thus escaped, and the box rose to its original position to be filled again.

Near Muang Luang Puka I met a caravan of about fifty ponies, carrying raw cotton by way of Muang La to Muang Ku in Yunnan. The leader wished to know if he could go to Muang Sing by the road I had come. I explained that one part was difficult for laden ponies to pass, but he thought he would make the venture next season. We reached the Nam Ta at its junction with the Nam Tarung at the head of which were salt-wells. Strange to say, they were under the jurisdiction of Muang La. The boundary of Sibsawng Panna crossed the watershed, and took in a triangular area well covering the salt region. Passing over the Nam Ta, we found ourselves on the open plain of Muang Luang Puka, which is not so extensive as Muang Sing, but is nevertheless fertile, and well suited for rice cultivation. It was sixty or seventy years since the plain had been cultivated; and the Chief of Nan had started a new colony. The settlers were arriving every day, and they took up their abode in some grass sheds to the south of the plain. The Chinese traders brought down opium in the rough, and copper vessels, which they exchanged for cotton. It was very hazy, and I was able to fix the position only by observation for latitude and azimuth to a fixed peak, the longitude being checked by the traverse.

On February 29 I set out from Muang Luang Puka for Muang Sai. After passing through some Lanten villages, where tobacco, indigo, opium, corn, and hillside rice were cultivated, we crossed the ridge which separated the waters that drained down into the plain of Muang Luang Puka, and marked the limit of the Lanten settlements. There the Kamus had made extensive clearings on slopes so steep that it

seemed surprising the rains, which are about to set in, did not wash away the grain as it was sown. To the east was the mountain Doi Wing, covered with thick forest, but I was informed that the Yao had already settled on it, and no doubt before many years pass the whole will be cleared. At the mouth of the river there is a village Pak-Hum, where there are Kamu, who have a *wat*, and are priests. Following the path over rough country, we came to the Nam Ta, there being a ford just below the mouth of the Nam So.

As we were in the Luang Prabang territory, the Nan officials wished to send the carriers back. As I would not have the money to pay them until I met Luang Pa Wat Sa Lan, who was coming from Sai, it was necessary to keep them for two days, and to this course the chiefs, after some altercation, agreed.

The boundary of Luang Prabang and Nan was along the Nam Ta from the Nam So. It then recrossed the Nam Ta, and followed a line which had always been disputed between Nan and Luang Prabang. Nan asserted its claim to the Nam Ta, while Luang Prabang on the other hand, affirmed that the presence of Nan in the valley of the Nam Ta was an encroachment.

The route passed over low hills, and in whatever direction one looked there were evidences of extensive cultivation. We went through villages peopled by settlers from Sipsawng Panna and Sip Tawng Chu Tai, and the inhabitants seemed to be very numerous. Numbers of men passed us carrying salt in the form of bricks, about 9 inches by 3 by 2½. The salt appeared very good, and was brought from Baw Luang and Baw Ile.

On March 4 I made a traverse of 7 miles, an exceptional length; but the path was easy, and I was all day at it. The distances were very close, and, on account of the jungle, the readings of the compass were necessarily numerous, taking up much time. I encamped at Pa Pung (the Beehive Rock), which is a conspicuous limestone rock 200 feet high at the junction of the road from Muang La of Sipsawng Panna. Not far off were Kamu, working at the lead mine.

The first European that ever entered Sipsawng Panna was the late General McLeod, who was in Chiang Hung in 1857, having been sent there from Maulmein by the Indian Government to inquire into the facilities for trade. Forty years ago the condition of the country was pretty much the same as now. Anarchy prevailed, and the

chief had been obliged to leave Chieng Rung to some place in the direction of Smo. Tributary chiefs were appointed by Ava and China, but since the troubles at Mandalay Ava had lost all its influence, though not so much as the other Shan states, owing to its proximity to China. The Mo Kawng was a boundary between rival states, even at that time caused a dispute. General McLeod wrote: "The Burmese next nominated Chao Tha Wu's second son, Maha Wang. These two chiefs, namely, Maha Noi and Maha Wang, ruled at the same time, one on the left bank and the other on the right bank of Mo Khong, but this rule was not peaceful, there was constant warfare carried on between them, and though Maha Noi obtained the assistance of Luang Prabang and Muang Nan, Maha Wang proved successful. During the hostilities above spoken of neither the Chinese nor Burmese aided either party. On the disappearance of Maha Noi, the Chinese confirmed Maha Wang."

In another place General McLeod wrote: "The court of Ava supported Maha Wang's son, and the Chinese did so too."

This all shows that Ava and China were the only countries concerned in the Sibsawng Panna. It also shows the close relations between Chieng Tung and Chieng Rung, which have become closer up to the present day, so that the interests of one are involved with those of the other.

General McLeod wrote: "It is not likely that the Tsobwa of Kiengtong especially (whose daughter is betrothed to Maha Wang's son), and those of Kiang Kheng and Muang Khoa, would give their countenance to the existing state of affairs by the presence here of their officers. These officers attend all the deliberations which take place, and watch whatever is passing."

It is not easy to ascertain what were the twelve states of Sibsawng Panna. The tales of Shans living there are known by the name of La, and excellent fellows they are. Originally there must have been twelve divisions, the chief of all residing at the capital, Chieng Rung, or Alawe, on the Nam Kawng. One difficulty arises from the frequent use of Muang La, which has several intonations, meaning different places.

On the Nam U, the eastern watershed of which is the boundary between Sibsawng Panna and Sipsawng Chu Tai, the northern watershed being the boundary between China and Sibsawng Panna are U, comprising U Nua and U Tai, where salt is collected and

Cheng Tong—this last comprises the district of the head of the Nam U, in which are the famous teak gardens of Hang and Wu. The gardens are entirely under the management of Chinese, who are governed by officials elected by themselves. The Lues have their own governors, who hold their commissions from the Chief of Cheng Rung. On the east of the Me Kawng, there are five states—La Nua, La Tai, Pong, Hing and Cheng Kong and U. La Tai is near Muang Sing, and the district is famous for its salt wells. The best well is called Baw Ho, and the salt is only about 6 feet below the surface.

On the west of the Me Kawng are the several states Hat and Lang, Wang and Pong, Pan and Cheng Lo, Nyot and Ong. Cho Mang, Long. The capital, Chiong Pung, is Above, has jurisdiction east and west of the Me Kawng; the western divisions Long, Kon, Ham, and Han, the eastern divisions Nam and Wan.

I met Luang Pu Wat Sri Pan, who brought with him money, and enabled me to pay off the carriers from the Nam Ing. I also turned up, connecting his traverse from Sai with mine. We pushed on and encamped at Ban Kaw Noi. The path was an easy one, and much used, passing over hills, with settlements of Moo, Yao, and Kamu in every direction. We met a number of ponies and mules, laden with raw cotton, on their way to Yunan. At this village there was a guard station. Whatever may be said of the administration of Luang Pralang, the people certainly enjoyed a sense of security foreign to them eight years before, and outside this the commissioner had established systematic order which was evident throughout the province. It was said the people were overtaxed. I understood there was a poll tax of four rupees on all adult males, and no other taxes, and, while opium, lottery and gambling were abolished, the consumption of opium and spirits was being controlled.

BUDDHA

CHAPTER XXXI.

WORK ROUND MUANG SAI.

On March 7, about 8 a.m., we marched into Muang Sai and took up our quarters in a wat on a small hill, cool and well protected from the glare. I received a letter from Phra Ridhirong, the Commissioner of Luang Prabang, and one from the old Chao Rajawong, now the Chief of Luang Prabang, both letters being very kind. The Chao was an old friend of mine.

I had the pleasure of knowing Phra Ridhirong shortly after joining the Siamese service, when he was closely connected with Phra Surasak in the formation and re-organization of an army.

A slight amount of friction between us in those days had led me to anticipate some opposition when working in the boundary now under his administration, and I had therefore written to him from Chiang Mai. The result was a most agreeable surprise. The assistance and kindly consideration which I experienced at his hands exceeded all that I had met with in Siam. Everywhere in his province I received the same encouragement, and my work became a pleasure such as it had not been for many years. The mail also came in neatly packed by the postal authorities of Luang Prabang.

Smiles had cleared a conspicuous hill to the north, and filled in the details of work round Sai; to the south-east, overlooking the rice-plain, was another sharp peak, Hipi, which I ascended and cleared. The rice-fields of Muang Sai were convenient for the measurement of a base line of about a mile in length, and this Smiles measured very carefully. It was necessary to connect Sai with the triangulation which was being carried to Luang Prabang, but the haze was very thick, and even on favourable days a distance of about 4 miles was all that one could see. The time was occupied in cutting lines, and unsuccessful attempts were made for stars. One night

when the stars were twinkling only [illegible] to take observations; but I [illegible] was a perfect plague of insects, which the men believed were spirits detained to prevent [illegible] from carrying on the work. I had a small [illegible] of jungle and discovered a pagoda, the existence of which had been unsuspected.

Muang Sa' is remarkable for the excellence of its rice, a small hill called Ta Lek ('the rock hill') in the neighbourhood is said to be nothing but rock. Further down the river, below its junction with the Nam Pok, is Muang La where large quantities of salt are procured. The salt-fields near the bed of the river, [illegible] course, can be worked only in the dry season. The salt appears as an efflorescence, and the surface earth, gently scraped off, is carried in baskets to bamboo sheds, where it is thrown into brick and-mortar tanks. Water being poured in, the brine is drawn off by a bamboo tube through the bottom of each tank, and passes into a trench cut in the ground, and rendered impervious to water by being plastered with clay. From this trench bamboos are filled, each bamboo vessel being simply a tube closed at one end by the knot. For the purpose of evaporation these vessels are placed over a rude furnace about 5 feet long, 2 feet deep, and [illegible] foot broad, the bottom being lined at an angle of about 15°. They are arranged side by side along the whole length, and the firewood is placed [illegible] only. One furnace produced in one day about [illegible]00 pounds of salt, which was sold in Luang Prabang for three rupees. The water issuing from the tanks is tested occasionally, and when it is thus ascertained that all the salt has been extracted from the earth the tanks are emptied and the earth spread over the river-bed, to become again impregnated. Muang La sent to Luang Prabang 300 pounds of salt as the annual tax for the privilege of working the salt-beds.

Muang La is on the Nam Pok, at the source of which is Doi Lakhan, on which stone pillars were supposed to have been erected, marking the boundary between Sipsawng Panna and Luang Prabang. It was said that these pillars had been removed by the Lao that they might with greater boldness cross the watershed.

Lead and silver were brought down the mountains, and evidently there was something more in the appellation of Muang Ngun (Silver Town) than a mere name. The hill is 4 or 5 miles from the town, and the road to the salt-wells passes directly over it. I sent some Siamese assistants to make a more detailed examination of the place

The towns, which eight years previously were deserted were now peopled by settlers from Sibsawng Panna

On March 22 I left Sai, and on my way met a little girl about five years old toddling about alone The little thing seemed hungry I gave her a meal of rice and plantains, and then had her face washed in the stream, to which process she objected strongly I brought her on to Ban Nahuang, giving her over to the care of the headman, with twenty rupees Her parents, who were Meo, whilst moving from one village to another, had abandoned the little thing which seemed to be an idiot. It is very likely the poor mother had fallen ill, and being unable to carry the child farther, had left it on a much-frequented road, to be brought on by any passer-by, meaning, I have no doubt, to seek it again in better times

Smiles followed the route to Muang Nga with a careful traverse, which he connected with a conspicuous peak near the town On this peak he erected a signal basket I followed the route towards Muang Ben, and at the point where the path crossed the watershed of the Nam U, I struck along the ridge and ascended the peak Nawng Chang, which was visible from Muang Sai On March 24 I ascended, and there was a chance of the impenetrable haze being cleared away About 2 miles to the south-east was a ridge, somewhat higher than Nawng Chang, shutting out the view. I cleared the southern extremity, but as Sai was not visible from it, both peaks were used in our operations.

On one occasion, whilst returning from the south-east peak to the camp, I was overtaken by a heavy shower, and in the darkness missed the path. Passing through a Meo village, I came to a large house, where men, women, and children were huddled together in great numbers They were surprised and alarmed by my visit, but, as they knew the whereabouts of the camp, I soon persuaded one of them to show me the path. In a short time I found the way again, and although drenched to the skin I reached the camp in excellent spirits, feeling certain that the haze would clear off, and I should be able to carry the work to a satisfactory conclusion

On March 28 beautifully clear weather began, by the 30th I had finished taking observations on Ki Nang, the south east peak On this peak was a structure which seemed to be the tomb of a Meo, but the Meo repudiated the idea of a tomb being there, and I regret that my curiosity did not lead me to a closer examination of it

There was a very [illegible] peak to the south (Pa[illegible]t) last at about 5 miles, which had to be cleared. Of course we did not know anything about it, but as, with the people behind me, I did not wish to retrace my steps I pushed on following the "divide" [illegible] Nam Nga and Nam Bon. The question of supplies was an anxious one, and as in the distance I could see some Yao villages, and perceived traces of many others, I decided to keep to the "divide." It was well I did so, for after travelling 5 or 6 miles I found myself in the midst of prosperous Yao villages, with poultry [illegible] goats, and I struck an excellent path leading in the direction of the peak I wished to ascend. On the way I met a jolly Yao bullock-driver, who "whistled as he went for want of thought," driving his solitary bullock before him. Hearing him, my guide whipped out of his bag a Jews-harp in order, to my amusement to show that he was not behind the Yao in musical talent. I had little thought to hear the Jews-harp there, and the guide's bag was the last place in which I should have looked for one.

I came to a halt, and entered into negotiations with some Yao for guidance to Parat, which was within sight. On its slopes I could distinguish old clearings, so that I was sure they must know available paths. I also advanced money for the purchase of rice to be delivered to me on the mountain. I had no reason to regret the confidence I placed in the men for the rice was duly and faithfully delivered. We moved on in a heavy shower, and passed the sites of some abandoned villages, but though we had completed a long day's march we were not near the peak. The next morning heavy clouds and mist hung about, and I could not feel sure of the whereabouts of the peak, although I knew it was not far off. Of course, the Yao said there was no higher summit than the one we were on and they wished to return to sick relatives at home, so I let them go. I gave directions for the camp to be pitched near water, and with two or three men started reconnoitring. I had not gone far when I was satisfied we were not on the highest point, before I returned to camp in the evening I had found the peak, and the next morning we all moved up. Having pitched our tents near the top, we began cutting the trees, which were of enormous growth, and cleared a considerable space, the top being a broad flat of upwards of 200 feet square. On one of the trees there were evidences of recent ravages by a bear on a beehive in the hollow of the tree, the bear, by means of his claws and teeth, had torn the wood asunder and got at the hive.

April 8 was a glorious morning, and the hill, cleared of all the trees, afforded a magnificent view. I felt the greatest possible pleasure as I traced, one after the other, the points of triangulation laid out to Luang Prabang by P'ia Sisdi. There were ten prominent peaks, each with its signal-trees and basket-signal, even to the highest limestone cliff overlooking Luang Prabang. It was splendid work, which had involved great hardships and labour, the observations had been intelligently and carefully made, some of the points having required three visits on account of the dense haze. A great number of points had been laid down, and the plane-table reconnaissance neatly performed.

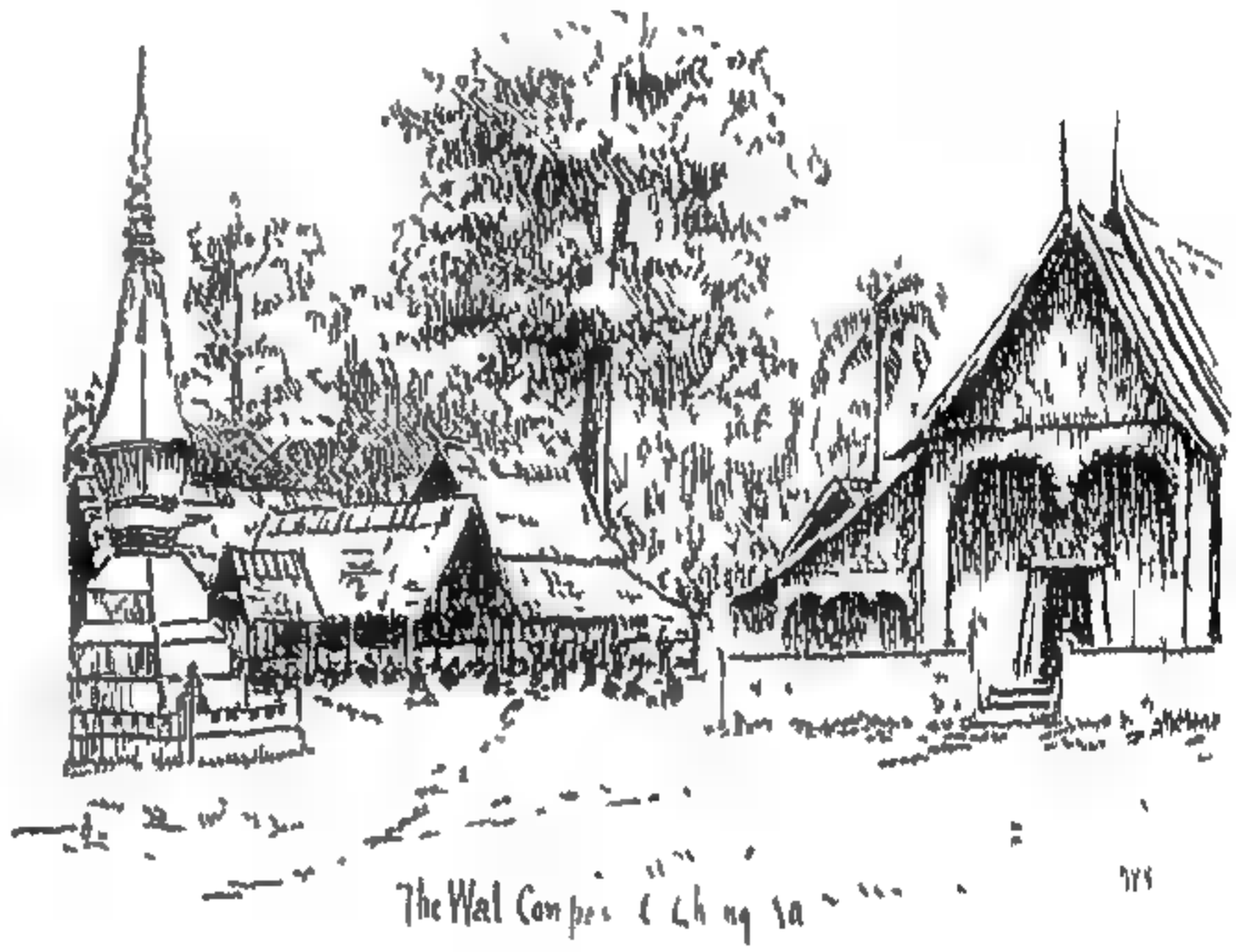
The course of the Nam U could be traced by its numerous pinnacles of limestone crag, notably Pa Sang, which rose to a height of 6110 feet above sea-level. Pa Kai Taw, near the Nam Kan, which has a similar reputation in Luang Prabang to that which Chieng Dao has in Chiengmai, stood out like a needle, the top being 7360 feet above sea level. But it was to be incontestably proved that this peak, like its compeer, must resign its claim to be the highest mountain.

The work on Parat being completed, two signal trees were left standing, one of which was over 70 feet high. Some of the Kamu had fallen ill, and this was attributed to the mountain-spirit seated on that tree and brooding disconsolately over the loss of all the other trees. To propitiate this spirit a fowl had to be procured for sacrifice, otherwise the men would have made up their minds to die.

Being unable to see the hill that Smiles had cleared, and on which he had erected signals and closed a traverse, I was obliged to clear another hill from which it was visible, and which connected it with Kinang. There were numerous mushrooms on the path, affording much amusement to the men, who busied themselves in collecting them. My provisions were running short, and by the aid of the ever-ready Yao we struck a path which led to Muang Nga. My little fox-terrier added to our difficulties by giving birth to a small family, for the bringing up of which elaborate arrangements had to be made. Thunderstorms now became frequent. When we struck the Nam Se, a tributary of the Nam Nga, we fell in with Kamu settlements, and the Yao returned to the mountains, as they felt the heat of the low valleys.

On April 12 we reached Muang Nga, where there were some two

fields, th gh the people [illegible] ly [illegible] a [illegible] n-side cultivation I paid [illegible] the mo [illegible] n Mu n g Sa, a [illegible] the next day in a small [illegible] t, went down the Nam Ngu At s [illegible] p nts on the river, as my guide told me attempts were [illegible] d salt, and traces of it were discovered In the [illegible] the sea, a bed of salt is a great treasure, and salt [illegible] t es are well k n wn



The Wat Con [illegible] Ch ng Sa [illegible]

CHAPTER XXXII.

LUANG PRABANG REVISITED

At Ban Sob Ya there was a very shady spot inviting us to rest, but the headmen of the village were apprehensive of my interference with the spirits, as the village cemetery was in the bamboo clumps hard by. Their custom was to cast the dead bodies of the poorer portion of the population into a ravine, whence, during heavy rains, they were carried down into the rivers. At the junction of the Me Ngao with the Me Nga I waited for the carriers. Of these two streams the Me Ngao is the larger, and the course of the river formed by the union of the two is but a continuation of that of the Me Ngao, yet the united stream is called the Me Ngo, this name being given to it probably on account of the town of Muang Nga.

When the carriers came we ascended a hill, Pa Lo. The path was through a jungle of high grass, and [redacted] the heat was intense, without a breath of air, the atmosphere was suffocating. Pa Loi, cleared of trees, was made an interpolated point. From one of Pa Sindi's points it was necessary that observations should be taken for Pinat, the better to connect the work. The hill I decided on ascending was Nang Wang, across the Nam Kawng, overlooking Luang Prabang. Following a Kamu path through extensive clearings, we came to the village of Ta Talat on the Nam Kawng. The different villages with names having the prefix Lat (Siamese Talat) were market-places in the good old days. The Nam Kawng at Ta Talat has a broad bed, but in the dry season the water flows in a narrow channel, dashing along over enormous rocks glistening like coal. The colour of the rocks is due to a deposit which in different parts of the Me Kawng assumes different hues, at one time black, at another various shades of green, then red. What the secret of the colouring is it is difficult to say, as the rocks are all of the same nature.

I ascended Nang Wan, and arrived just in time to have my tents pitched before there was a great downpour of rain. During the night there was a heavy storm, with thunder and lightning. The rain flowed like a stream through my tent, which was kept with difficulty from being blown over, and the cracking of the trees was not cheerful, but I was glad to think of the "clear shining after rain." The next day was rainy, and in the night was had another storm, but not like the first, and I was better prepared for it.

On April 20 I had hoped to get a good view, but the inhabitants, anxious about rice clearings, had begun burning the old trees cut some months previously, and kept the fires up night and day. However, Paat and other points were connected, and I was only anxious to connect Nawn Chang and Kinang, to make the work more finished.

The basket-signal was in excellent tone, for the pole, the trunk of a tree, had been let into the ground some 10 or 12 feet. It was going, labour replacing it, but it will stand for twenty years.

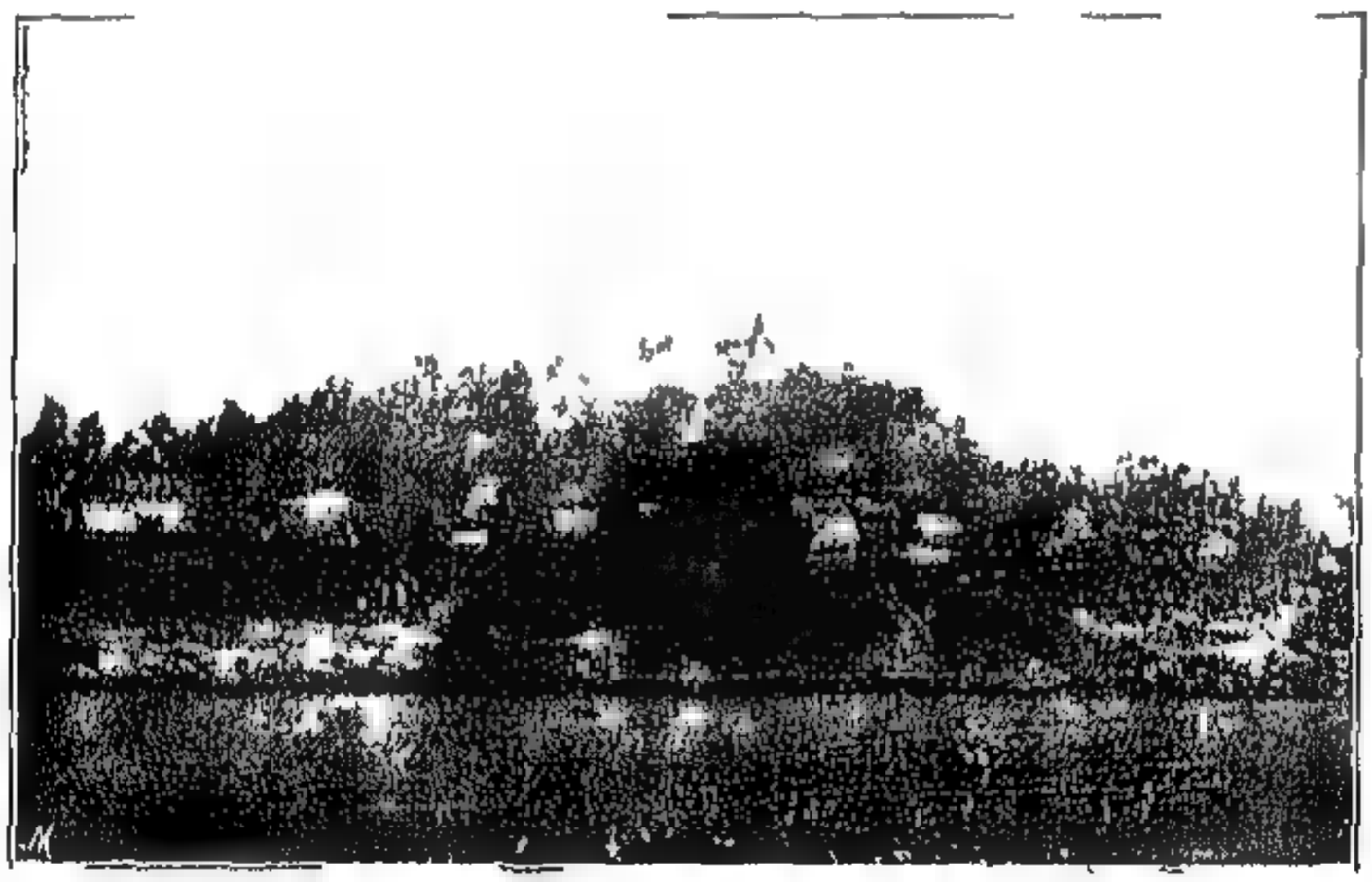
On this mountain we found that the beetle called the horned enoplotarpis, specimens of which the late Mr. Bates was anxious to secure, was very plentiful. The men amused themselves in the evenings by catching these insects. The species was discovered in Burma, not very long ago, by an Indian naturalist, Sigra Tha Beng. numerous, and dung feeders, I wondered where they could come from and was informed that rhinoceroses were plentiful on the hill, though I did not come across any traces of them.

In a clear afternoon Luang Prabang stood out distinctly. At evening the pagoda spires and the gilded mouldings of the wats glancing in the light of the setting sun, added their effect to that of the natural features of the landscape—the hills and plains and the noble river—and caused in me a feeling of irresistible melancholy. Since my visit in February 1887 Luang Prabang had passed through much suffering. It had been ravaged by the Haw; its people had been pillaged and murdered or driven from their homes and the old chief had only been rescued by his sons forcing him to a place of safety. The town seemed doomed to suffer, for within two months last past it had been again burned, and, more recently still about 500 of its inhabitants had died of an epidemic sickness.

On April 28 I went to Luang Prabang, and while waiting for a

boat to cross over had time to note the changes. Near me on the right bank of the river was a large wooden building painted in red and blue, and a bamboo fence enclosing a large area, in which were several houses. This was the French Vice-Consulate, built after the treaty negotiated with Siam had been signed, but not ratified by the French Chamber.

Across the river, the quarters where the chiefs, the Siamese commissioners, and the bulk of the people lived, had a new look. The pagoda on the hill, Tat Chawn Si, had an old appearance, and while I was looking at it the familiar gongs and drums hard by rang out their harmonies, indicating a change of watch. Night and day, at regular intervals of three hours, the watches have been marked in this way for ages, and it was pleasing to see one custom at least that had been clung to in spite of all changes. The small hill, 200 feet



AT LUANG PRABANG.

high, had not altered much in appearance, except perhaps that there was more jungle, and the old Chinese looking *salas* were, if anything, going fast to decay.

In the direction of the old chief's house was a massive brick building not completed. There were also the usual thatch roofed houses, but they were new, erected since the recent fires. At one time the ground had been covered with a mass of cocoa-nut and areca palms, which were all cut down. There had been some attempts at street-making, and immediately opposite, at the distance of 770 feet

for the lack on which I stood, was an excellent hard gravel, beyond which a good stone road led to the Chinese quarter. On the side of the river was a pagoda, with signboard bearing large letters in Chinese and English.

I was glad to see Phra Srisdh congratulated him on the excellence of the work he had done. I took advantage of the opportunity to earnestly thank Phra Sudhanom for the kind assistance he had given to make the work successful. Across the Mae Kwang I took up a very uninformal quarters which had been built for a school. The floor was of concrete, and the sides and roof were of bamboo, neatly painted white, while the posts were yellow. The colours were obtained in Lampang Prabang, white, yellow ochre, cobalt, and mineral reds being plentiful.

The commissioner had been good enough to provide all of us with excellent accommodation. Smiles, who had arrived seven days before me, was looking well and all the young Siamese assistants were doing well. We called and saw the old Chao, who was very feeble. We also visited the Chao Luang (now the chief), who looked old and remarked that I looked old. We were glad to see him, he seemed the same good natured quiet man as ever. Returning to my comfortable quarters I made arrangements for the observation of latitude and azimuth at the golden pagoda, on the small hill Tak Chan Si. There was great satisfaction in finding that the position of Lampang Prabang was now connected with the Indian triangulation. The connection may have been effected by a rough-and-ready method, and not geodetic, but the country through which it was carried was very rough, and I leave the results to the future, confident that when precise tests are applied their accuracy will be proved.

Smiles prepared and measured a base-line over 2 miles long, which was only 2 inches different from the value brought down by triangulation.

We called on Dr Massie and Mr Cavalli, and found them very interesting. Dr Massie was an enthusiastic geologist.

An opening now offered itself for the improvement of Phra Srisdh's prospects, and though I was sorry to lose his assistance in the work, I was unwilling to stand in the way of the young man's promotion. With regret, therefore, I allowed him to return to Bangkok, when, on account of his hard and faithful work he was appointed secretary in the Ministry of the Interior, and received the title of Phra Srisdh,

besides being decorated with a commandership of the Crown. I was informed that I was to be recalled to Bangkok, but this statement seemed improbable, considering the orders I had with me. Kias with the great seal for the Chief Commissioners of Chiengmai, Luang Prabang, Nawng Kai, Bassac, and Pratambawng, and Kias with the small seal for my own personal use. The wording of all I then was presumed to be the same, and the following was the substance—

"The Minister of the North to the commissioners, governors, and petty officials of provinces.

"Royal commands have been received that survey officers must proceed to the boundary, and must make surveys in the following provinces:—Nakawn Sawan, Pitsanulok, Pichai, Tak, Chiang Mai, Tern, Lakawn Lampang, Nan, Luang Prabang, Nawng Kai, Puan, Nakawn, Chumpasak, Ubon Ratchatani, Pratabawng, Nakawnratchasima, Sakon-Nakawn, Nakawn Panom, Ta Uten, and all the smaller provinces along the frontier under the jurisdiction of the Ministry of the Interior. When the survey officers arrive let all the officials give every assistance in procuring transport, labour, and provisions, and as the survey officers have been provided with funds for the prosecution of the surveys, let everything be paid for according to the custom of the country, with the exception of provisions for menials. Let these be provided by the Government."

The order covered a great deal of ground, I had not half performed my task, and could not very well return without the special instructions for which I was waiting. We occupied our time in preparing the computations of the work, and as I was feeling somewhat indisposed, we went up Pu Kum Kao, a splendid hill overlooking Luang Prabang. I remained there for a week, and though it rained nearly the whole time, the atmosphere was very pure, and one felt the better for the change.

The Chao Luang and the commissioner came up and stayed for a few days. It was a great undertaking for the Chao Luang, who is no light weight, but I think he enjoyed himself, and if he could ascend the hill without the exertion of walking would go there frequently. I suggested to him to have a road made to Kum Kao Noi, which could easily be constructed, and then he could ride a pony to the top, where he might erect houses, and every year take a change, together with the old chief.

When we returned to Luang Prabang, the Me Kawng was a

magnificent sight. It was full to the brims, having risen more than 50 feet above low-water mark. The water was red, and the people were out in boats catching the drift wood, which was floating in every direction. The Nam Kun was also full, and now at the mouth there was no flow, the water being banked up by the Nam Kawng, which rushed madly past.

CHAPTER XXXIII

THE HIGHEST PEAKS OF INDO-CHINA

Our stay in Luang Prabang was not unpleasant. The commissioner, Phra Rhidhong, did everything that was possible to make our recess agreeable.

We had our festive gatherings. May 24, the Queen's birthday, brought the Siamese commissioner, Dr. Massie, and M. Cavilion together.

On July 13 the French Consulate was profusely decorated, and the three or four days following were given up to festive rejoicings on account of a coronation ceremony in connection with the chief. On September 20, 21, and 22, the King's birthday was celebrated. At this *fête* the commissioner, a man of great taste, surpassed himself. The whole of Luang Prabang was finely decorated and illuminated, and a handsome wooden building, just completed, was converted into a reception hall. It was thronged with people, who crowded in to see a painting of the King, much to the annoyance of Dr. Massie, who was constantly asking if it was a "divinity."

Dr. Massie's manner was brusque, but he had a kindly disposition. In his geological researches on Pu Sai, near Luang Prabang, he found coal, and said, besides, he was on the traces of a salt-field. His pockets were always full of fossils of the reptile and fish period. He also collected a great number of *orchids*, some of them very beautiful, but he unnecessarily exposed himself to danger, and in his geological excursions often got soaking wet, without taking the slightest precautions to avoid fever. For eight years he had travelled over Indo-China in the same way, and had never known a day's illness. In such cases an attack of fever is usually very severe, and so it was with him, for the first seizure carried him off. He was on his way to Saigon when overtaken with illness at Nakawn Panom, he met

some Roman Catholic missionaries, who earnestly pressed him to remain among them until he should be sufficiently recovered to proceed, but though his condition then was such that he resembled a living corpse, he held on his way and died soon after, in descending the river.

We, however, had to think of continuing our work, as the rainy season ends about the first week in October. The commissioner promptly came to our assistance with transport coolies. We were to pay each man four teals a month, and feed them on rice, salt and chillies. The rice was the difficult part, for steamboats had to be made at intervals, and as the men ate only as much as they carried it took some time to get the rice together.

Each Siamese had fourteen carriers for heavy marching order, with a full complement of supplies. I had forty men, and Smiles the same number, each man carrying an axe or clearing the hill-tops. Thus, fully equipped, we took leave of our old friends at Lang Prabang and started on October 7, the commissioner and the sons of the old chief seeing us off.

The week before we left it had been raining very heavily. The Nam Pa was flooded, and naturally ferocious, so that the little Khamu coolies had difficulty in crossing. I made them all join hands and ford the river at one of the rapids, the water being neck high. The force of the stream was great, and nearly all the baggage was wet. The only things kept dry were those carried on the heads of men, and held there by other men. Our route lay along the same path that Pha Pichai had taken with 200 men to Lang Chieng Kam some years before. The road was exactly as it had been then, and followed the wandering course of the Mo Pa, which has on each side picturesque limestone cliffs. The scenery was very beautiful, but the constant crossings of the stream (one much involving over twenty) detracted somewhat from the pleasure of observation.

The path led over a mountain called Pu Heng, which we cleared and on which we left two signal-trees, bearing a large brass-sign, which will last for years. Until the afternoon the tops of all the high mountains were enveloped in clouds, and made an unfavourable impression. When Pu Heng had been cleared, we found that we had somewhat overshot the mark, and had to retrace our steps and ascend a hill called Pu Kau Taw, which blocked the view. This hill gave a great deal more trouble than we had anticipated. Very long

limestone crags cropped out above the surface in all directions, and water was very scarce. Our Meo guide was not at a loss for a drink; he cut a bamboo, and with a hollow reed sucked out the water; he then turned the bamboo into a pipe, and, while resting, enjoyed his smoke. On the top of the hill were very large trees, which, on account of the difficulty of getting a footing among the crags, were not easily cut down. In this region it is not unusual to find ramboos, plantains, and oaks growing together. One redeeming feature was that wild cattle and pigs seemed plentiful, and also the beautiful silver pheasant.

After finishing the work on this peak we returned to Pa Hong, and then went on to Muang Yiw, in the valley of the Nam Kan. Having interpolated a hill which we had cleared, we made use of it to determine the position of Muang Yiw. Our route now led through the valley of the Nam Kan which was very unhealthy; but at last we ascended Pa Ting, and everything changed—atmosphere, vegetation, and scenery. Passing through a group of cedars, where we had glimpses of a beautiful, undulating, open country, we encamped near an old wat, rifled long before by the Haw. We were now in the district of Puan; but as I had been there before, its beauty did not take me by surprise. There was now no uninteresting jungle to plod through, and every man, even though barefooted, stepped cheerfully forward. The natural charm of the place thrilled me with the same keen pleasure which I had experienced years before. The exhilarating atmosphere quickened the senses and heightened one's appreciation of the wealth and beauty of the country. The unsatisfactory feature in the prospect was the absence of human habitation, for, though there was abundant evidence of prosperity in former times, the only work from which we could derive benefit was the road on which we travelled. Even this had suffered from neglect, and at times, in marshy ground, or in the neighbourhood of a brook, it proved treacherous.

We pitched our tents on the wat-grounds of Luo Pon Tawng, and were waited upon by the servants of the sub-commissioner. These men, each of whom gave himself a title, professed total ignorance regarding us, and demanded to know who we were, and the reason of our coming. I asked for their authority to put these questions, and they replied that their persons were as good as letters. I showed them the Kia, and when they wished to take it to the sub-

commissioner, I really [illegible] for an explanation why they [illegible] sent to lock after the ancestor, and [illegible] they would not allow me to [illegible] so I was prepared for all [illegible] and [illegible] commissioner of Laung [illegible] assistance from officials of the district [illegible] orders from Prince Prachak [illegible] Kai.

We ascended Pu Sun on November 23 [illegible] perfectly clear day after rain. With the telescope [illegible] 8-inch theodolite I was able to distinguish [illegible] basket-signals on Pu Nam Wang and Pu Sang Nam, each [illegible] 60 miles distant. The basket signals were over 20 feet in circumference. They were made of split bamboo, the white side out; they were oval in shape, and when new, however, [illegible] readily distinguished at great distances on a sunny day. The top of the hill, Pu Sun, was of granite, a feature which [illegible] possessed in common with other hills in this watershed. From the summit there was a magnificent prospect, extending over not less than 1000 square miles of the greater part and the finest [illegible] region seemed luxuriant as with waving cornfields and lands, and gardens watered by streams which, now hidden in the shady recesses, now appearing as streaks of silver, were lost in the distant haze. The lower slopes of the hills, however, [illegible] with grass, were marked with well defined contour [illegible] at intervals of [illegible] feet, as if purposely laid out by the hand of man; but these lines were, in fact, paths which had been trodden by herds of cattle grazing over the plateau in bygone times of peace and prosperity. The summits of the hills were overspread with forest, the low wind progress of which was arrested at the jagged but distinct boundary-line assigned by natural forest law, as though the command had been uttered, "Thus far, and no farther."

Close by, to the east, is Pu Sun Noi, a flat-topped, well wooded and well-watered hill, which would make an excellent site for a sanatorium. It shuts out the view of the holes. Tung Chang Kam, where the Siamese lost a number of men before they drove the Haw from the stockade. Two excellent signal-trees were left standing, and a huge basket-signal. Not far from Lao Pong Tawng

was Ban Mawn, where there were extensive iron mines, the iron being of excellent quality.

We encamped near an old wat of Wieng Kut. Near this place were the traces of extensive gold washings. Some day a reef containing gold may be discovered, and what a magnificent climate it would be to have a gold mine in.

We ascended Pu Ke, near the top of which was a thriving settlement of Meo, a busy people whom it was always a pleasure to meet.

From the summit of this hill, in the early morning of November 26, we enjoyed a spectacle such as I had never witnessed before. There we looked down upon the clouds, which overspread the hills, and seemed banked up to a level about 6000 feet above the sea. The appearance was that of a snow white ocean from which, here and there, a lofty mountain peak rose, like an island, towards the clear blue sky. At the foot of the hill, and to the east of it, flowed the Nam Nia (Siamese Niak) unseen, but its course seemed indicated by the clouds, which moved along as if drawn by its current. At one place there was a sort of cloud-cascade, where the vapour tumbled onwards in huge masses, so that one almost expected to hear the sound of the commotion. Gradually the surface-level became lower, showing more and more of the hills until, pierced by the beams of the sun, the whole mass rose in confusion and dispersed.

It was very painful to find that all my old Puan friends were dead. I had hoped to meet the good and true men who, at considerable risk to themselves, had assisted me during my former visit.

Leaving the hill and the friendly Meo, we went to Chieng Kwang where we had some difficulty in getting rice. Supplies of that commodity were doled out to us in baskets, each bearing a seal in testimony of the accuracy of its contents, which I found to be exactly one half the quantity given at Muang Yaw.

The next hill which it was necessary to ascend was Pu Sao, to the south east, and, in spite of obstructions and fog we hurried on. My guide had a very ingenious means of striking a light. He was provided with an instrument resembling a pop gun, made of iron, closed at one end, air tight, with a perfectly fitting ramrod at the extremity of which was a hollow for touchwood. With a sharp twisting motion the ramrod was rammed home, and when pulled out the touchwood was found to be burning. There were numbers of traps for snaring pheasants, which were very plentiful as also were

[illegible] and several varieties [illegible] We saw [illegible] elephants, and we [illegible] [illegible]

At last we reached the top [illegible] oaks and rhododendrons, with trunks [illegible] and twisted, showed the prevalence of strong winds [illegible] 2 feet thick

The morning of December 8 was clear and sunny [illegible] the sun shone brightly, the temperature was [illegible] and there was [illegible] the ground The waters of the Nam Kawng glistened [illegible] morning light, and, in the distance [illegible] we could discern the blue outline of the [illegible] Smoke [illegible] a basket signal is large as one of the two [illegible] trees, and we turned our attention to Pu Bia, the highest of all the peaks This hill, from where we stood seemed surrounded with sharp pinnacles of limestone rock, which would render the ascent very difficult; but fortunately, some of our men knew the country and were able to find us an easier route Under their guidance we retraced our steps, took the main road [illegible] Kwang to the Nam Kawng and at Ban Na Luang struck off to Muang Awm [illegible] excellent position, with extensive rice fields [illegible] cultivated Here we rested a day and distributed tobacco seed, and chillies to [illegible] transplanting, to prepare them for the climb

Leaving Muang Awm we came to the site of Muang [illegible], a town which had been abandoned [illegible] the appearance of the fields showed that many a long day had passed since they were cultivated The place had the reputation of having been a [illegible] ground for an excellent breed of ponies We passed [illegible] the large and thriving Meo village at the foot of the hill [illegible] The settlement had formerly occupied a lower position but during a season of heavy rains it had been flooded and the inhabitants had moved to higher ground

With a Meo guide we began the ascent and kept on the side of the hill When on the move early next morning we found that the sodden ground had frozen and higher up we saw a pool, on the surface of which was [illegible] ice [illegible] amusement to the little coolies, each of whom set to [illegible] a piece The summit of the hill consisted of a cap of clay slate and limestone, and the trees were all very small, being a species of box-wood Moss was very plentiful, and arrangements were immediately

made for running up small huts, which a thick layer of moss made quite snug.

Like most hill tribesmen, our Kamu coolies wore as little clothing as possible, sometimes merely a piece of cloth scarcely large enough for its purpose, and under no circumstances sufficient to keep out the cold

A nearer view of the gigantic limestone cliffs, where eagles had

MIO VILLA

their eyries, showed that any attempt to approach from the north or east would have been hopeless

The night of December 20, 1892, was very clear and early next morning the thermometer registered 27° Fahr. Ice had formed above an inch in thickness and the cook who had been collecting it, was very much surprised to find that when melted it was already the colour of the coffee he intended making. There was some difficulty about water, as it could be procured only from a ditch, but this inconvenience lasted only a few days The whole night of the 21st a high wind was howling, but the thermometer did not fall

to freezing point, and in the morning it was 7[illegible] [illegible] 22nd we had rain [illegible] On the 23rd [illegible] we left the hill, which had proved a most satisfactory [illegible] some parts of the Mekong having been visible [illegible] Pha is 3375 feet, and it must be [illegible] the first [illegible] the mountains south of the parallel of 23[illegible] The highest mountain in the Malay peninsula at the source of the Pang is [illegible] 000 feet, though there are some which rise to a height of 120[illegible]

We returned to the site of the old Meo village [illegible] the hill, and as our supplies were pretty well exhausted we were glad to receive from the Meos a quantity of indian corn, fresh vegetables, molasses, and ginger. From this last the cook made a decoction which was not a bad substitute for tea or coffee. The molasses was boiled, a couple of eggs broken upon it; the dirt, of which there was as much as sugar, was skimmed off, and we had some excellent treacle. We become good friends with the Meos, and as they wished to buy cattle, they desired to accompany us to Ban Tan Hok. The governors of this place were in trouble owing to a dispute with the Kamu of Muang Pu as to the ownership of the beehives which abounded on the limestone cliffs and from which large quantities of wax were collected.

We left the Nam Mo, a large tributary of the Nam Ngum, but without villages on its banks, and came to the deserted village of Na Luang. The houses seemed substantially built, but a strange disease, a kind of fever, had attacked the inhabitants, carrying off its victims after one day's illness. The villagers in their alarm attributed it to the evil influences of spirits, and because [illegible] suspected the water had something to do with it. [illegible] stream was sluggish and of an oily appearance, one small tributary which formed the chief water-supply, being particularly so. The unfortunate people had also been afflicted with a plague of rats which had overrun their fields, a plague which had extended over a considerable portion of Luang Prabang.

We crossed the Nam Ngum. I could not ascertain that any one had ever descended this river, which, we drew, has [illegible] fall for a length of about 500 feet. [illegible] the water, and I sent Luang Pu Wat Sa Ta with chain and compass to make a traverse. The task was not an easy one, but he performed it most successfully along its whole length. The cave through which the river flows is frequented by swallows, which, in

great numbers, build their nests in the rock, and by bees, which swarm in the holes and crannies of the limestone rock. Every year the neighbourhood is thronged with people who come to collect the edible nests of the swallows and the wax deposited by the bees, but the spoil is difficult to reach, and scarcely a year passes without the death of some adventurous climber.

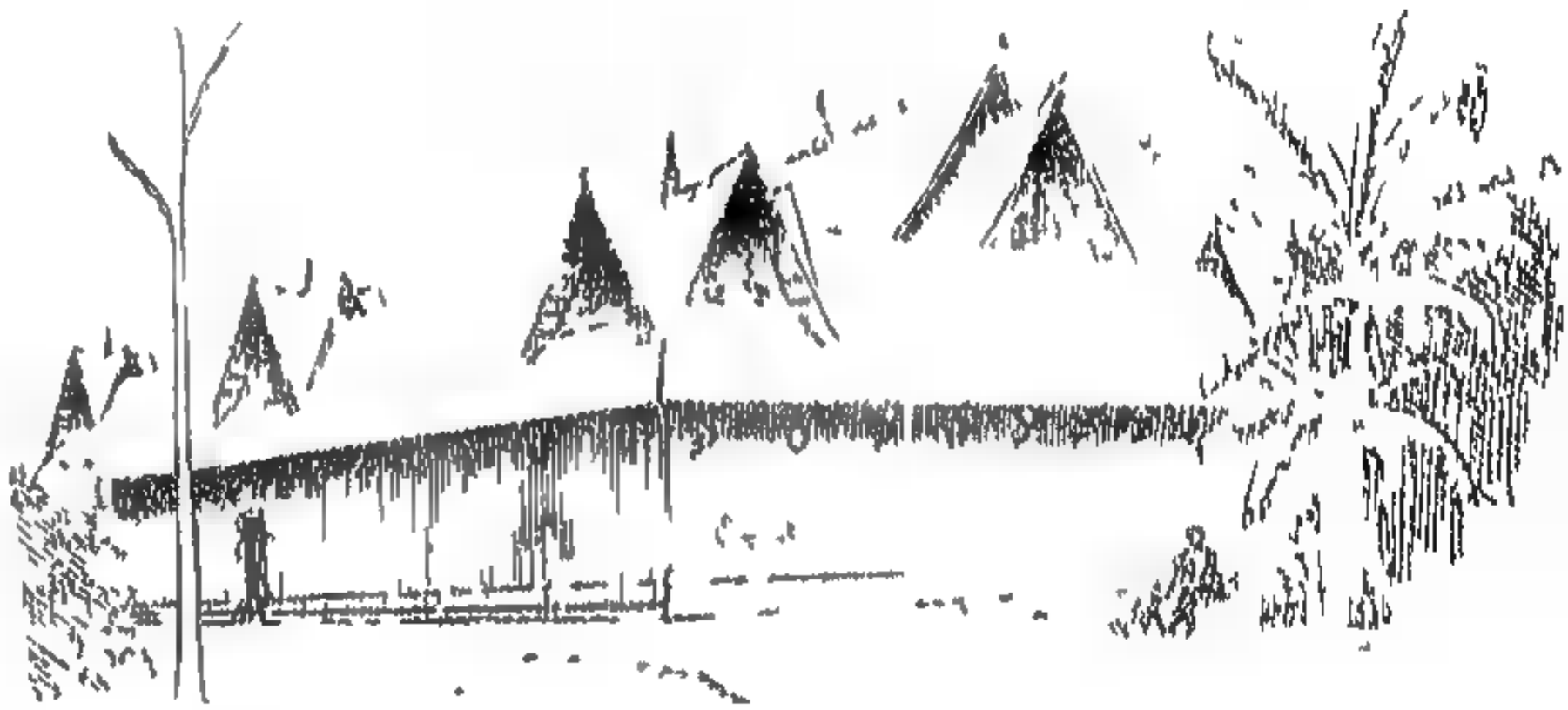
We marched to Muang Pun and there met Nai Heng, who had been of considerable assistance, and had just cleared a high and prominent peak called Pu Mieng. He went on to Muang Kest to push on the transport sent by the orders of Prince Prachak, and to meet us at Ban Sawt, while we set out for Pu Mieng. Again we fell in with the useful Meo, who were pleased to be our guides. On this occasion I noticed they had provided themselves with *buckets of whisky*, which they were constantly imbibing without any apparent intoxication. A large block of flint caused delay; it was of excellent quality, and the men insisted on chipping off fragments to use with their steels in striking lights. A great number of partridge and grouse were flushed, and we let go two handsome specimens that had been snared.

Pu Mieng is a peak 8132 feet above sea level, the north, west, and south sides being almost perpendicular and unapproachable. The shadows of these mountains in the mornings and evenings creeping over the distant slopes as though projected 40 miles away were interesting, and added very much to the beauty of the landscape.

On January 9, when we marched from the hill, a high wind from the south was blowing, and the dreaded haze, which retards all work, began to show itself. The ascent of one other peak, Haw Chor (which Nai Heng had cleared) had still to be accomplished in order to complete the work before the regular haze set in. Our route took us to the deserted site of Chieng Di, on the Nam Son, a tributary of the Nam Nit. The spot is supposed to be in the possession of malignant spirits, the souls of the governor and his followers who were murdered by men from Weng Chan in the days of its prosperity. Though the place is naturally fertile, even when many years ago, Luang was well populated it was difficult to get any man to take up his residence there as governor.

Marching along the bare slopes of the hill we passed through Ban Na Wan and ascended the divide between the Nam Nit and Nam Ngum, which was 200 feet above the Nam Son. A lesser

descent to [illegible] (Sian [illegible]) [illegible] several Numbers of pilgrims were [illegible] [illegible] very well to walk along the path [illegible] rough to allow pursuit [illegible] For three months we went over beautiful country [illegible] well watered plain, Kung Ma La ("Horses Play [illegible]) which is adjacent to the Kung Lai Sai



CHAPTER XXXIV

CONCLUSION OF THE NORTHERN TRIANGULATION

ARRIVED at Ban Sawt, we met the transport sent by order of Prince Phachak, but, as the bullocks were slow and expensive, we managed to do without most of them. We had now to part with our faithful Prabang friends. The Kamu were all in excellent health and quite stout, never before in their lives having had so much to eat, and each was carrying a little money to his home.

On January 28 we completed the work on Haw Choi, but the haze had regularly set in, and it was vain to expect to see our long rays until the rain had fallen. We could do nothing but set about fixing the positions of important places by short rays until rain fall.

At the foot of Haw Choi, on the side of the road to Muang Yaw, were a number of large stone jars, neither so large nor so well finished as those of other groups. In a hollow there were some larger, and those that were fractured showed large nodules of quartz embedded in their lying on the slope of the hill were numbers of small boulders, irregular masses from which, apparently, the material for the construction of the jars had been taken.

We had not the earth beneath one of the jars lying so as to have been carried on, at some time, beneath all of them, and this may account for their leaning position. We found a jar of very inferior baked clay full of clay and amber beads. Another contained an urn of superior workmanship and almost white. It was cracked and showed traces of having been searched before; there was a piece of iron which was possibly used by a former depredator, it looked as though it had been brought from the hamlet standing on the ruined site of Ban Sawt. We left Ban Sawt with eight elephants and twenty men, who carried all the things and instruments. On the crest of the hill, and by the side of the path, were large blocks of stone hewn into a particular shape. One was about 7 feet long, 2 feet deep, 2 feet

[illegible] were three or four [illegible] they were [illegible] at the time when the country was [illegible] Mu[illegible]

There is another collection [illegible] sea-level which over [illegible] another collection [illegible] was visible [illegible] Nan Son

In the early days of February the weather was very hazy, in the 40th I saw a collection of [illegible] which [illegible] Nan Ngon, that at one end sloped to the Nan Son [illegible] Nan. The place was called Nawng Ang, and I expected to see a [illegible] such as that at Muang Sui. It turned out to be [illegible] and seemed to be due to the excavation of a stiff blue clay much used for pottery. I was, however, [illegible] over the country. From the bare hill, Hua Gang, I saw [illegible] the west bank of Kung Nat Son, to the east of which was the [illegible] hill, Doi Tung where the Nan K[illegible] which traces its sluggish and winding course over the plain [illegible] In the plain was [illegible], in another, a deserted village, were [illegible] with the flower-stems towering from 12 to 15 feet above the prickly canes, [illegible] a yellow-leaf bamboo clump [illegible] in secluded spot, as though [illegible] were hundreds of [illegible] of tree [illegible], which had [illegible] many years. When the country was populated by [illegible] population, there must have been difficulty in obtaining [illegible]; [illegible] have been supplied, as in [illegible] by the [illegible] herds of cattle.

The [illegible] that [illegible] the plain had been [illegible] a month [illegible], but, owing to the heavy dews and [illegible] fogs, the country had almost recovered its greenness. Observations were also made from Pu Ifrat of Ban Ta, [illegible] points were fixed in the most portions of the region.

On February [illegible], with fourteen coolies and [illegible] carrying the instruments I ascended Pu Ka and succeeded in [illegible] its position by means of signals erected in two places near Chieng Kwang. On February 19 we reached Chieng Kwang and took up quarters at Wat Kubaw, where we were out of the way of the [illegible], who had shown every disposition to give [illegible].

After having fixed the position of this town by observations for

Pu Huat and Pu Kabaw, hills overlooking it, we moved off to peaks overlooking Muang Ngan, selected and cleared by Nai Heng.

While we were on Kabaw, on February 27, rain fell, the haze cleared, and the distant mountains were rendered visible. Leaving no time, we passed on to Muang Lum, which, deserted when I last saw it, had now been re-settled, and was certainly more cheerful looking. From Muang Pang we went to the hills overlooking Ngan. The western slopes were covered with virgin forest for miles, but the eastern slopes were completely bare of trees. There were a number of villages, and the whole treeless valley had a very fine appearance. Traces of extensive fortifications were seen in every direction along the mountain slopes, on which herds of buffaloes were peacefully grazing.

We descended to Muang Ngan, where the signal on the river was at an elevation of 4867 feet above mean sea level, and the climate was delightful. From this town we immediately set out for the peak, Doi Sam Sun, 8710 feet above mean sea level. We enjoyed the climb through the heavy forest. On every hand there were beautiful ferns and flowers. We passed some enormous cedars, called Mai Le Le, the girth of one was 17 feet 6 inches, and of another 14 feet 6 inches each being measured at 10 feet from the ground. There was a strong cinnamon smell in the forest but I could not find any of the trees. Partridges were numerous and I bought three decoys, which I liberated, two of them had been prisoners for years, carrying their fellows, but they appreciated liberty and flew off with lightning speed. The top of the hill was a great granite block, the peak being on the main watershed.

With me was a man who had been my guide in 1884 from Muang Pang to Muang Ngan. He was a brother-in-law of the Governor of Muang Ngat, who, with his five sons, the youngest five years old, had been murdered in 1883 by the Governor of Muang Mawk. The wife and daughter (my guide's sister and niece) had been taken to Chao Kanti at Tatum, but had been redeemed by my guide for ninety rupees. The sister had since died, but the niece was living in Muang Ngan. As this man knew Muang Ngat, I sent him with Nai Heng to clear and erect signals on the hill called Pu Sai Lai Tong.

On the granite rock at the top of Doi Sam Sum, Smiles fixed an excellent signal very ingeniously and so firmly that it stood throughout the season and braved many storms. Crossing the Nam

[illegible] would towards be hewed down [illegible] and [illegible] would view the whole valley of Muang Ngo [illegible] of the hills [illegible], were bright [illegible] and the contour lines, at intervals of [illegible] great regularity. My [illegible] sixty years [illegible], and on my asking him how the [illegible], he replied "They are paths made by buffaloes and elephants wandering." I remarked that it was a beautiful country [illegible] to the subject. "Yes," he said, "I was [illegible] my father, grandfather, and all before them, as far as I know, were [illegible]. Those old fortifications that are seen all round belong to a time beyond the memory of man; for my grandfather knew nothing about them, but those lines of earthworks at the side of the hill were once evidently a bulwark to Muang Ngo. Terraces on the hill-slopes show that [illegible] were cultivated with garden crops. The ancients were very *handy* at [illegible] streams, and channelled the water over the fields. Once the country was crowded with a happy and prosperous population; they are all gone, and the glory of the land departed."

On March 8 we said "good-bye" to Muang Ngo. Passing over Pu Mieng we had once more encountered with success Mr. [illegible] or tea, and crossing the main watershed we descended into a mangy jungly country and once more by the Nam Ma. A leper at driver met with a bad accident, [illegible] Muang Ma and the elephant all on the steep path which by [illegible] times had become very slippery. I [illegible] Muang Ma, who was on his way to drink the water of Chiang Kwang, and urged him to return as soon as possible as his absence would be awkward. We encamped at Pan Muang where there was some excitement about a man-eating tiger which about ten days before had carried off the footman's [illegible]. Fortunately, we kept no watch on the animal, but the men were placed in security in a house in the village and we heard no more of it.

The valley of the Nam Ma is rough and very jungly, and the right bank of the river are precipitous limestone hills. Muang Ngo is in an excellent position, which recalls Puan, but it has been completely deserted since the murder of the governor and his sons.

The surrounding hills are well wooded, and teem with game. There was a beautiful pheasant, called Nok Ang Kawt which had a call like the yelping of a dog. We met with the traces of a herd of elephants. Pushing on to the head of the Nam Mo, we ascended Pu Sai Lai Leng, 9059 feet above mean sea-level. On this magnificent peak, which had been cleared by Nu Heng, we found two varieties of rhododendron with red and white flowers. There were also a number of orchids, two kinds were very pretty, with a white heart and five pink petals, the others were all white.

It was necessary that our work on this peak should be as complete as possible, for from this point began the eastern boundary of Siam. But a dense haze veiled the face of the country, and, while we anxiously waited from day to day, our provisions ran short. It was not till April 22 that we could finish our observations. I then sent some men down to Ban Na Ngoi, at the northern base of the hill, to purchase rice, while the rest went back to Muang Mo. Some of the Na Ngoi men came up, ordinary Lao under the administration of Anam. They showed me how the boundary then ran between Anam and Siam.

From this summit I had expected an uninterrupted view towards the east, even as far as the sea, but mountains intervened, extending apparently to the seashore. One grand peak, Pu Hut, 8175, I think, could be seen from the shore, thus, only a few more peaks and I might have reached the Gulf of Tonkin. But I had to turn back, and continue the triangulation south to the Me Nam Kawng.

Our journeys were now more difficult, the paths were very slippery, leeches swarmed in some places, and we had daily showers. The main watershed was still granite. We passed through Muang Mawk, a pretty spot with old fortifications, all but deserted. Progress along the Nam Mang was difficult, the river was much swollen, and as the crossings were frequent, there was considerable danger for the men carrying loads. Their troubles were, however, over when we reached Ban Tinum on May 4.

As the rains had set in, it was not advisable to have too many men moving about on the hills. Smiles therefore went down the Me Chan to prepare and measure a base-line on the plain across the Me Nam Kawng, while I ascended Pu Mun and Pu Kap and completed observations there. On this latter peak, among the stones of a little brook, a strange creature was captured. It was like a lizard,

about 12 inches long, with a shield like a tortoise on the back and stomach, the tail, which was about 4 inches long, was as the people said, that of a alligator, the neck was long, and the head small and hard. The head could not be drawn into the shield, but the neck was completely protected. I could not escape in the darkness, the men said they had not seen one before.

On June 1, accompanied by Nai Hong, we started for Pu Pang. The first part of the ascent was interesting. The forests were thick, and there were numerous tracks of elephants and rhinoceros. There are two kinds of the rhinoceros; they are known to the people as *Sa* and *Ket*, and are sought for their horns, the most valuable horns being distinguished by a protuberance on the under side. Cinnamon was plentiful in that region.

With the ascent our difficulties increased. The rocks were oolite, and in some cases so weather-worn as to resume the exact shape of swaying rocks, over pot-holes were met with. The streams were red with ferric oxide. We found ourselves fairly launched into difficulties, for the rocks rose perpendicularly all round, and often we were brought to a standstill while the men looked for openings. Our only means of egress was sometimes through dark passages, over yawning chasms, or by scaling rocks with ladders hastily made of twigs and roots. Sometimes having with difficulty scaled one height we discovered that it was encompassed by others, which rendered progress impossible, and retracing our steps we had to renew our efforts at some more hopeful spot. Our perplexities were increased by the rain which fell every day, and by the fog which constantly hung round and shut out the view. The upward advance was toilsome and slow, but at last we reached Pu Pang, 6087 feet above sea-level. The southern face of the hill was a sheer precipice from 3000 to 4000 feet drop into the valley of the Nam Tawai.

The strain on the men was very severe, and my Malay servant who had been suffering from some pulmonary complaint died. The poor fellow was buried on the hill.

From Pu Pang there was a magnificent view, and in the valley of the Nam Tawai could be seen some abandoned fields, the site of a Chinese settlement, called Muang Tawai, in the days of Wiang Chai's prosperity. After completing the observations on Pu Pang, where a large cypress was used as a signal-tree, I pushed on over rocks and through fog to Pu Katy, 6614 feet above sea-level. But beyond this

I could not go, for, between it and Lawek (6906 feet), less than a mile distant, there were sheer perpendicular precipices. The attempt on Phu Lawek had to be abandoned, as it was now too late in the season (June 15). These peaks are difficult to climb at any season, being nearly always enveloped in fog, while all the winds of heaven beat against their exposed perpendicular sides. The supply of water would also be a cause of trouble. Water may be heard deep down in the recesses of the rocky ravines, but it is not seen nor can it be approached. We got our supply from the daily rain.

Leaving the hill, I came down the Nam Nia to the Me Kawng, and there, on June 17, for the first time heard that the French had, to the surprise and indignation of the inhabitants, claimed the whole country to the Me Nam Kawng. I also got orders to return immediately to Bangkok.

Being anxious to make my work as complete as possible, I at once set about the measurement of a base line, but, as the water was fast rising and the base line unfortunately placed, the attempt proved impracticable. I finished the observations for latitude and azimuth, which were sufficiently accordant with the values deduced from the triangulation. My intentions had been to "recess" at Nawng Kai, and, after the rains, to resume operations with a view to carrying the survey round Siam, and thus settling once for all the geographical limits of the kingdom. It was, therefore, with great reluctance that I had to abandon this important work.

At Kong Sadawk on the Nam Kawng there was a settlement of Roman Catholics under a priest, a native of Chantabun, belonging to a mission, the headquarters of which were at Nakawn Panom. He could give us no authentic news, but believed there was trouble, as numbers of soldiers in boats went down the river. There were rumours, he said, that as soon as the French came to the Me Kawng, all the Christians would be murdered. Siam was one of the few countries in the world where Christians had not been persecuted for their religion, and Prince Prachak, who personally went to Nakawn Panom, reassured the missionaries. We hurriedly went up to Nawng Kai on July 6, where we received the greatest kindness from the Prince.

To return to Bangkok *via* Korat was out of the question, as the whole valley of the Me Nam Kawng was under water. We could reach the capital conveniently by Paklai and Utaradit and therefore

went up the river to Paklai. Owing to the heads the rapids were not distinguishable, and we capsized during the hours. At Paklai meeting some elephants which were returning to Utaradit, we hired them for twenty rupees apiece, and in eight easy marches we reached Utaradit. There we took boat, and arrived at Bangkok on August [illegible], 1893.

On August 7 the blockade of the port was raised, and M. Pavie, who was now the French Minister resident in Siam, and whom I had not seen since we parted above Pakanam [illegible] years ago, returned to Bangkok. Diplomatic relations between France and Siam were thus resumed.

Smiles, the best of companions and staunch friend, died a year later, while exploring in the eastern provinces.

APPENDIX.

The history of Chieng Sen, as copied by P'ra Sitai-Sawu in the year (Chulasakarat 1218) A.D. 1856.

The first country made was Chieng Lawa and P'ra Anuradha, who made an era, came with one thousand followers (Borwan).

He founded Muang Nguan Yang. His descendants were Lao Kop Lao Chang.

Lao Kao Koo Ma Muang reigned 5 years.
,, Tang reigned 20 years.
,, Kon ,, 0 ,,
,, Loo ,, 10 ,,
,, Kup ,, 5 ,,
,, Kum ,, 15 ,,
,, Keng ,, 20 ,,
,, Ko ,, 20 ,,
,, Tum ,, 7 ,,
,, Tum ,, 20 ,,
,, Tum ,, ,,
,, Sua ,, 21 ,,
,, Kwak ,, 21 ,,
,, Kwan ,, 37 ,,
,, Chuen ,, 10 ,,
,, Chum Palung reigned 1 years.

K'un Chuang, reigned 1 years, who was killed in battle, finishing the dynasty of nineteen kings.

The last king was succeeded by

Lao Ngum Lang, who reigned 22 years.

Lao Chuen, who reigned 10 years;

Lao Muang, who reigned 25 years.

P'ra Muang Rai (Pra Mang Rai). This king, after three years' reign, founded Chieng Rai in the year 2 (A.D. 2 2), and in 6 founded Muang Ping. He then waged war with Lampun, and after a seven years' siege took the place. In five years he built Wiang Kum Kam, 1 18

supposed, on a site between the present Chieng Mai and Lampun. At this time the wife of the king, Nang Pu Ka, went to Ava, and brought back with her a gong, taken to Cheng Rai, and in 757 (A.D. 1295) Chieng Mai was founded. The king died, being struck by lightning, at the age of eighty, in the year 780 (A.D. 1318).

He was succeeded by his son, K'un P'a, who reigned seven years.

K'un P'a was succeeded by P'a Son Pu, who reigned at Muang Nguen Yang two years, and founded Chieng Sen 632 (A.D. 1330). The city was 1250 wahs long and 700 wahs broad. There were eleven chief officials. The chief two to look after the gardens, two to look after animals, one to look after soldiers, two to look after the palace, one in charge of the country outside the city, one in charge of buffaloes, and one in charge of temples and religion.

The heads of revenue were ivory, men and women, cattle, bees' wax, turtles, spirits, cakes, anything dug out of the earth, charcoal, insects, anything that hangs to trees, seal lac-wax, hammocks, fields, orchard and garden lands, all land, all water, and the heads of divisions collected the taxes.

In 727 the Haw (Yunnanese) came to Chieng Sen, and were defeated, and in 767 they again invaded Chieng Sen. The angels were invoked by Tao Sam P'a, and the Haw were struck by lightning and dispersed. An astrologer and priest by name Sam Wong So, who helped to bring out the destruction of the Haw, was given the island Dawn Tee, on which he built some beautiful temples.

In 938 (A.D. 1576) Upyao Va Rupeme came to Chieng, and went back after three years.

In the year 951 (A.D. 1592) Hupa Achi invaded Sen with 700,000 men, and from that time Chieng Sen became part of Burma.

In 1187 Muang Na and Chieng Kong rebelled, and 1188 were reconquered. The same year Chieng Hung was conquered. In 1197 the King of Burma made a division of his territory between two brothers. The younger brother was Chao Ing Ca Tha Wong Na Kwa. His tributaries were Chieng Sen, and the following countries were under Chieng Sen: Muang Kai, Muang Lai, Muang Lan, Muang Pako, Chong Lay, Muang Luang P'uka, Muang Puka.

Then there is a list of governors with an item known in 1248 a pig was born of an elephant, and the history winds up as follows: —

Since 1168 (A.D. 1806) there has been no seat of Government at Chieng Sen.

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LONDON: W. HEAD LOWE AND SONS, LIMITED, LONDON AND BECCLES